TWENTY-SIXTH
ANNUAL REPORT

EXTENSION SERVICE

UNIVERSITY OF MARYLAND

FOR THE YEAR 1940

COLLEGE PARK
MARYLAND

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Cooperative Extension Work in Agriculture and Home Economics, Extension Service, University of Maryland, and the United States Department of Agriculture, Cooperating.

T. B. SYMONS, Director

(Distributed in furtherance of acts of Congress of May 8 and June 30, 1914)

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LETTERS OF TRANSMITTAL

DR. H. C. BYRD,
President, University of Maryland:

I have the honor to present herewith the Twenty-Sixth Annual Report covering the work of the Extension Service of the University of Maryland, in cooperation with the U. S. Department of Agriculture, for the calendar year 1940, together with a financial report for the fiscal year ending June 30, 1940.

Respectfully submitted,

THOMAS B. SYMONS,
Director, Extension Service.

January 1, 1941.

TO HIS EXCELLENCY HERBERT R. O'CONOR,
Governor of Maryland:

In accordance with the requirements of the Act of Congress approved May 8, 1914, and known as the Smith-Lever Act, I have the honor to transmit herewith the Twenty-Sixth Annual Report covering the work of the Extension Service of the University of Maryland, in cooperation with the U. S. Department of Agriculture, for the calendar year 1940, together with a financial report for the fiscal year ending June 30, 1940.

Respectfully submitted,

H. C. BYRD,
President.

January 4, 1941.

TWENTY-SIXTH ANNUAL REPORT

OF THE

UNIVERSITY OF MARYLAND
EXTENSION SERVICE

FOR THE YEAR 1940

By THOMAS B. SYMONS, Director

INTRODUCTION

THE agricultural industry in Maryland, as a whole, did not experience conditions or problems during the year 1940 that could be termed decidedly out of the ordinary. An acreage of crops slightly above the preceeding year and above the ten-year average was grown and the total estimated value of production was about 3.5 percent higher than in 1939. The season was backward and some crops suffered from both wet and dry weather.

Extension activities have developed to the point that they cover a wide range of services and rural people depend upon extension workers for assistance in whatever problems confront them. The impact of unsettled and uncertain world conditions was felt increasingly during the year and, especially in the later months, this fact became more prominent in the plans and programs as rural people were confronted with changed and changing conditions. It is in such times that people turn more than ever to the trained workers in whom they have found by experience they can place confidence.

In this brief report, no attempt is made to even list the many projects carried on. A few figures from the reports of agents in the several counties give some conception of the number of people served and the extent to which they utilize the service.

Influence of Extension Work

IT has always been the aim of extension work to help people help themselves. To serve the largest numbers with the limited personnel available, it has been the policy to work with groups

to quite an extent, but a considerable amount of direct, personal help has been a feature of the work through the years. Whatever their problem, farm people have felt free to seek the assistance of their extension workers.

Extension agents made 24,928 visits to 11,170 different farms or homes in conducting their work. There were 110,075 calls at their offices and 76,416 telephone calls for information or regarding various matters relating to extension activities. In communicating with the people they served in disseminating information, they wrote 70,556 individual letters, and 3,817 circular letters about matters that concerned a considerable number. More complete information was furnished to 56,874 persons by means of bulletins distributed by the extension agents. The radio was utilized, too, and 355 talks were given. By means of method demonstrations, good practices were shown, as well as described and explained. There were 6,302 such demonstrations held, with a total attendance of 116,161 persons.

Local leaders throughout the State have made it possible to greatly extend the influence and benefits of work done by regularly employed extension workers. During the past year, 451 meetings were held for the purpose of training local leaders for participating in various projects or programs. More than 30,000 rural men and women and boys and girls participated in tours, achievement days, and encampments conducted by the extension agents.

While no record can be obtained which adequately reflects the influence of the work, reports show that changes in practices on 23,076 farms definitely resulted from the agricultural extension program, and in 16,116 homes from the home demonstration program. Reports show also that 33,902 different farm families and 12,962 other families were influenced by some phase of the extension program. Boys and girls from more than 8,000 different homes were enrolled in 4-H club work, each of them carrying out definite projects under the supervision and with the assistance of extension workers and local leaders.

Soil Conservation

AMONG the most valuable contributions of the Extension Service in 1940 was the assistance rendered in bringing a more general recognition of the importance of conserving our

soil resources, both from the standpoint of the welfare of all the people and that of defense of our land. There are 4,384,000 acres in Maryland farms. All of this is not good crop land. In fact, perhaps not more than 50 percent could be classed as good land. There are infertile, waste acres, swampy acres, and acres that are poor because of over-cropping—or erosion. Only within the last few years has the subtle devastation of gently sloping lands by sheet erosion been appreciated.

Conservation measures, such as are shown on this farm, are coming into use rapidly, especially as a part of the program in Soil Conservation Districts.

It is gratifying to record the generous response of farmers to this realization and their cooperation with Federal and State programs for soil conservation.

The Soil Conservation Districts Law, enacted by the Maryland General Assembly in 1937, through active support of the Extension Service and farm organizations, has accomplished wonders in the comparatively short time. Five soil conservation districts, involving 1,724,000 acres, have been formed by the voluntary action of the farmers concerned. Two more districts, involving approximately 607,000 acres, are in the process of formation.

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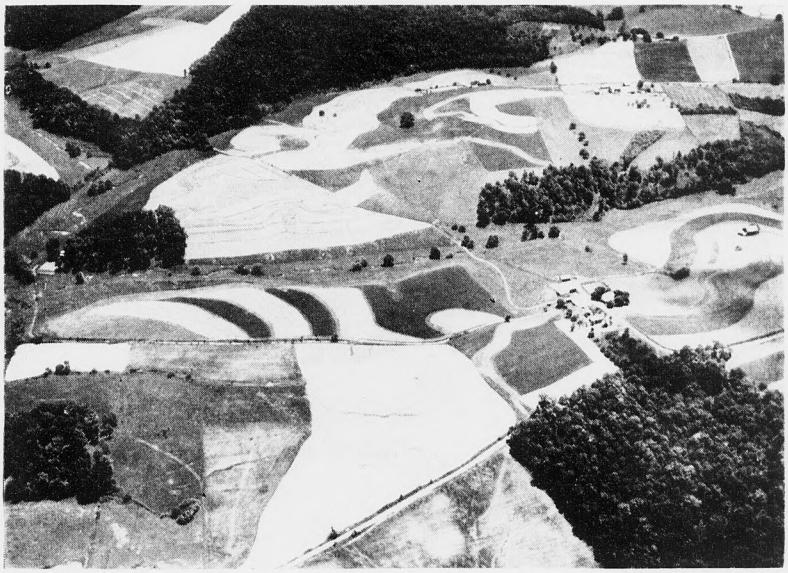

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Farmers of Maryland have begun and are now developing, with the aid of agencies available, what may properly be designated as a revolution in methods of farming, with the goal and slogan of "Save Our Soil." Contour farming and strip cultivation are gradually taking the place of up-and-down hill farming. This is an outstanding, long-time project of lasting benefit to all the people and to the State as a whole, in which all can work together vigorously.

Cooperative Institute

IT has always been the policy to encourage cooperative marketing by farmers and assist organizations engaged in cooperative efforts to as great extent as resources permitted. As a definite step in that direction, the Extension Service, in cooperation with cooperative organizations of the State, arranged and conducted the first annual Cooperative Institute, which was a three-day session held at the University of Maryland in August. The purpose and object was to bring together officers, employees, leaders and members of farmers' cooperatives in Maryland and adjoining states for practical discussions and interchange of ideas and experiences on problems connected with cooperative marketing of farm products and purchasing of supplies.

A number of the best known leaders in the cooperative movement in this country appeared on the program, and lively discussions were developed of such practical questions as the responsibilities of members, of managers, and of directors, building patronage, sound cooperative records and accounts; retail credit policies, and many others.

The Institute proved especially timely in view of the fact that rapidly changing conditions are bringing new problems to all lines of industry and business, including the business of cooperative organizations.

Federal Programs

EXTENSION workers, particularly the county agents, continued to carry heavy responsibilities in connection with the several programs being carried out in the State as a part of national progress. Farm and home people look to the Extension agents, both agricultural and home, as a stable force upon which they have found they can safely rely. They recognize that these

agents have shown conclusively their willingness and ability to cooperate with any agency that is endeavoring to render sound and unselfish service to their people.

The AAA program was modified somewhat in 1940, among the changes being higher rates of credit for carrying out soil-building practices not normally carried out, a new provision designed to be of benefit to those on small farms whereby they could earn a minimum payment of $20, and a special payment of $30 for planting trees. The wheat insurance program resulted in some increase in numbers of farmers participating, and in the volume of crop insured.

The land use planning program required a great deal of time and effort on the part of Extension agents. The hope that it would effectively mold the programs of various new agencies into a well-rounded farm, home, and community program has not yet been realized. Coordination of programs is still badly needed in the interests of efficiency and effectiveness of service.

Mattress making became an important project in the later months of the year and many low-income families were helped in obtaining good mattresses.

Late in the year, the county and home demonstration agents cooperated with county AAA committeemen in offering Maryland farm families with low incomes an opportunity to make

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mattresses for their use. A large number of mattresses had been made and the project was being carried on actively at the end of the year.

Rural Electrification Spreads

WITH the addition of 2,000 during 1940, Maryland now has a total of 20,000 farms, or nearly one-half the number in the State, which are enjoying the benefits of "high line" electricity. This wide extension of electricity to farms in the last few years has been brought about by a greater appreciation of the value of electricity, by a liberal attitude of utilities, by a more extended program of the REA, by the establishment of reasonable and uniform rates, and by the educational work of the Extension Service. During the last five-year period, the Extension Service has assisted approximately 10,000 farm families with their rural electrification problems.

Tobacco Marketing

THE assistance of the Extension Service was sought in connection with problems involved in marketing Maryland tobacco. The relative merits of marketing through the established facilities in Baltimore, or by the so-called loose-leaf auction system were a live issue. Specialists and agents of the Service cooperated with the Farm Bureau and tobacco growers in a series of meetings throughout the tobacco-growing area of the State at which it was the aim to inform growers regarding the advantages and disadvantages of the two systems of marketing their tobacco crop. It is an extremely important problem to the five Southern Maryland counties and challenges the best cooperative efforts of all concerned in order that a sound solution may be developed.

Judging Teams Make Records

MARYLAND has had reason to be proud of the record made by its boys and girls in regional and national competitions in past years, but their accomplishments in 1940 deserve special mention. When the team from Frederick county placed first in the livestock Judging contest at the International Exposition in Chicago, it was the first time that a team from an eastern state has won the national non-collegiate championship. For the second successive year, a dairy demonstration team from Mary-

land placed first in the eastern section of the contest at the National Dairy Show. Other judging teams have won high honors, and the winnings of Maryland 4-H livestock far surpassed any records of previous years. More detailed reports are given in later pages, but it is evident that substantial progress is being made in development of livestock, dairy, and poultry work with the boys and girls of the State.

When a team of Maryland boys won the non-collegiate stock judging contest at the International Livestock Exposition, it was the first time this honor had been won by an Eastern State. From the left: H. R. Shoemaker, County Agent for Frederick county, who helped coach the team; Harry Fouche, William Martin, and Staley Hahn.

American Farm Bureau Meeting

FOR the first time, the annual meeting of the American Farm Bureau Federation was held in Maryland, with the Maryland Farm Bureau, Inc., as host in Baltimore. This was a distinct honor to the State and recognition of the progressive accomplishments of our organized farmers and their participation in national affairs pertaining to their industry. At the same

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time, it placed upon them a great responsibility. Extension workers cooperated wholeheartedly and the result was another demonstration of the fine way in which all agricultural interests work together. Visitors at the convention were generous in their comments upon the thorough and cordial manner in which all matters were handled.

Impact of War

THE impact of war upon the agricultural industry of Maryland was being felt in increasing degree as the year progressed. While Maryland is fortunate in that farmers are not nearly as dependent upon export markets as some states and regions, yet the repercussions on those states and districts were having their effects upon producers of this State. It was evident toward the close of the year that farm people would have to deal with conditions different from those they have experienced in the past and that Extension workers would be confronted with a grave responsibility in helping them to meet the new situation as they arise.

Programs designed to place greater emphasis upon proper nutrition as a means of securing and maintaining better health and as part of a program for national welfare were underway and it was evident that they would be major considerations in the coming year. Adequate amounts of the proper kinds of food for rural families at home, and supplies to be sent to the nations abroad which are helping to defend the democratic mode of life are essential and education to assure that all farm people are thoroughly informed has been made a major effort of the Extension Service.

The corps of trained and experienced workers throughout the State provided by the Extension Service—workers with whom the people in the respective counties and communities have worked closely and in whom they have confidence—is a force whose value cannot be estimated in the period that lies immediately ahead.

Crop Yields and Values

MARYLAND farmers harvested 1,679,200 acres of all crops, including truck crops, in 1940, or about one percent more than the acreage harvested in 1939, and also the average for the last ten years. There were increases in acreages of wheat, bar-

ley, potatoes, hay, tomatoes and sweet corn, but decreases in acreages of corn, oats, rye, and tobacco.

The crop season was a week to ten days backward of normal most of the time. Both dry and wet weather did some damage to truck crops, especially on the Eastern Shore. The tobacco crop, looking disastrously at first, improved as the season progressed in spite of general lateness of planting.

Preliminary estimates of the total value of the principal crops place the figure at $46,759,000, which is about 3.5 percent increase over the comparable value in 1939. To this figure should be added approximately $2,000,000 which was received in benefit payments by the farmers who cooperated in the conservation program.

Significant among changes in acreage were an increase of 7,000 acres in barley and a decrease of 6,000 acres in oats, indicating that in line with the trend of recent years farmers shifted considerable acreage from oats to barley.

Yields of practically all crops were not substantially different from those of the preceding year, and the average. Better yields per acre were obtained for oats, potatoes, sweet potatoes, hay, tobacco, tomatoes, cantaloupes, strawberries and green peas.

Total production was greater in 1940 than 1939 for wheat, barley, potatoes, sweet potatoes, hay, peaches, tomatoes, sweet corn, cantaloupes, strawberries, and green peas.

Better prices prevailed for corn, barley, sweet potatoes, hay, apples, sweet corn, cantaloupes, and green peas.

Crops which had a greater total value than last year were corn, wheat, barley, sweet potatoes, hay, apples, sweet corn, cantaloupes, strawberries, and green peas.

PRODUCTION AND VALUE OF CROPS

Crop and Year	Acres	Per Acre	Total	Unit	Per Unit	Total	Value Per Acre
Corn							
1940	501,000	35.0	17,535,000	Bus.	$.70	$12,274,000	$24.50
1939	506,000	36.0	18,216,000	"	.63	11,476,000	22.68
1938	501,000	37.0	18,537,000	"	.55	10,195,000	20.35
Wheat							
1940	388,000	19.5	7,566,000	"	.77	5,826,000	15.00
1939	377,000	19.5	7,352,000	"	.78	5,735,000	15.20
1938	471,000	20.0	9,420,000	"	.63	5,935,000	12.60
Oats							
1940	35,000	32.0	1,120,000	"	.44	493,000	14.00
1939	41,000	27.5	1,128,000	"	.44	496,000	12.10
1938	41,000	32.0	1,312,000	"	.37	485,000	11.83

PRODUCTION AND VALUE OF CROPS (Continued)

Crop and Year	Acres	Per Acre	Total	Unit	Per Unit	Total	Value Per Acre
Barley							
1940	79,000	27.5	2,172,000	"	.52	1,129,000	14.30
1939	72,000	30.0	2,160,000	"	.48	1,037,000	14.40
1938	43,000	30.5	1,312,000	"	.48	630.000	14.65
Rye							
1940	19,000	12.5	238,000	"	.61	145,000	7.63
1939	20,000	12.5	250,000	"	.65	162,000	8.10
1938	14,000	12.5	175,000	"	.62	108,000	7.71
Buckwheat							
1940	5,000	19.0	95,000	"	.63	60,000	12.00
1939	5,000	20.0	100,000	"	.64	64,000	12.80
1938	6,000	20.0	120,000	"	.60	72,000	12.00
Potatoes							
1940	25,200	115.0	2,898,000	"	.63	1,826,000	72.46
1939	25,000	95.0	2,375,000	"	.91	2,161,000	86.44
1938	26,000	115.0	2,990,000	"	.62	1,854,000	71.31
Sweet Potatoes							
1940	9,000	165.0	1,485,000	"	.80	1,188,000	132.00
1939	9,000	160.0	1,440,000	"	.70	1,008,000	112.00
1938	8,000	130.0	1,040,000	"	.80	832,000	104.00
Hay (All Tame)							
1940	422,000	1.30	550,000	Tons	11.10	6,105,000	14.47
1939	412,000	1.25	517,000	"	10.60	5,480,000	13.30
1938	397,000	1.41	558,000	"	9.40	5,245,000	13.20
Tobacco							
1940	38,000	840.0	31,920,000	Lbs.	.205	6,544,000	172.21
1939	40,000	820.0	32,800,000	"	.212	6,954,000	183.85
1938	37,500	780.0	29,250,000	"	.188	5,499,000	146.64
Apples (Com'l Crop)							
1940	.....	.....	2,077,000	Bus.	.65	1,350,000	.....
1939	.....	.....	2,362,000	"	.62	1,337,000	.....
1938	.....	.....	1,419,000	"	.71	1,007,000	.....
Peaches							
1940	.....	.....	440,000	"	.85	374,000	.....
1939	.....	.....	427,000	"	.95	406,000	.....
1938	.....	.....	352,000	"	1.10	387,000	.....
Tomatoes (For Mfg.)							
1940	47,400	4.6	218,000	Tons	10.30	2,245,000	47.36
1939	45,500	4.2	191,100	"	13.90	2,656,000	58.37
1938	56,000	2.9	162,400	"	14.10	2,290,000	40.89
Sweet Corn (For Mfg.)							
1940	27,600	2.1	58,000	"	9.60	557,000	20.20
1939	25,300	2.1	53,100	"	9.10	483,000	19.10
1938	34,000	2.5	85,000	"	11.20	952,000	28.00
Cantaloupes							
1940	8,000	110.0	880,000	Crts.	.70	616,000	77.00
1939	9,100	95.0	864,000	"	.60	518,000	56.92
1938	9,400	75.0	805,000	"	.60	423,000	45.00
Strawberries							
1940	7,900	90.0	711,000	"	1.75	1,244,000	157.47
1939	7,900	60.0	474,000	"	2.15	1,019,000	129.00
1938	8,100	55.0	446,000	"	2.95	1,316,000	162.47

PRODUCTION AND VALUE OF CROPS (Continued)

Crop and Year	Acres	Per Acre	Total	Unit	Per Unit	Total	Per Acre
Snap Beans (For Mfg.)							
1940	9,800	1.5	14,700	Tons	38.20	562,000	57.35
1939	10,000	1.6	16,000	"	39.80	637,000	63.70
1938	12,700	1.7	21,600	"	38.40	829,000	64.72
Green Peas (For Mfg.)							
1940	16,200	2000 Lbs.	16,200	"	55.00	891,000	55.00
1939	15,800	1260 "	9,950	"	50.50	502,000	31.80
1938	18,900	1880 "	17,770	"	52.90	940,000	49.73

LIVESTOCK ON FARMS

January 1, 1941

	Number	Value per Head	Total Value
Horses and Colts	81,000	$94.00	$7,595,000
Mules and Mule Colts	26,000	123.00	3,198,000
Dairy Cows and Heifers (2 yrs. and over)	208,000	70.00	14,560,000
All Other Cattle and Calves	144,000	34.54	4,974,000
Sheep and Lambs	70,000	7.30	514,000
Swine, Including Pigs	214,000	6.50	1,385,000
Chickens	3,711,000	.81	3,006,000
Turkeys	94,000	2.95	277,000

ADMINISTRATION

ONE change was made in the administration of the Service as compared with former years. The Assistant Directors, E. I. Oswald and Miss Venia M. Kellar, continued to assume increased responsibilities. In addition, Dr. E. N. Cory was appointed Assistant Director during the year, for the purpose of giving special supervision to control activities conducted under the Extension Service. Paul E. Nystrom served as County Agent Leader in association with other activities under the Agricultural Adjustment Administration.

Increasing demands and limited funds made the problems of administration extremely difficult. There was the constant situation of attempting to render services that were desired and needed without adequate resources.

The devotion of leaders to the work and the fine cooperation of all forces was responsible in large measure for the results accomplished. The cooperative relationship between the Service and other educational agencies in the State was continued. Splendid cooperation existed with the Vocational forces. Assistant Dean, Dr. H. F. Cotterman, is State Supervisor of Vocational Education and this enables the programs to be integrated and carried out cooperatively.

The State Grange, the Farm Bureau, and other farm and rural organizations, and the Boards of County Commissioners continued their support and cooperation of former years, so that all forces in the State were welded together in closely coordinated efforts.

The Director of Extension was chairman of the State Soil Conservation Committee and the work of the Soil Conservation Service through the cooperation of E. N. Davis, State Coordinator, was integrated with Extension Service in the several counties and Soil Conservation Districts.

Increased duties in connection with various governmental activities without corresponding increase in personnel and funds for the Extension Service proved a burden on the workers, especially those in the counties. County agents have assumed additional responsibilities, but there is a limit beyond which they cannot go in that respect. Development of the service in response to the demands necessitates assistance in the field and it is the hope that funds will be provided in the near future to relieve the pressure on the county Extension forces. With the emergency programs that are being launched in connection with the needs for defense, the needs for such assistants becomes much greater.

It is a pleasure to acknowledge with warmest gratitude the loyal support of all forces.

EMPLOYEES AT HEADQUARTERS—1940

THOMAS B. SYMONS	Director
E. I. OSWALD	Assistant Director
MISS VENIA M. KELLAR	Assistant Director
*E. N. CORY	Assistant Director in Control Work
A. H. SNYDER	Extension Editor
P. E. NYSTROM	County Agent Leader and Specialist in Farm Management
E. G. JENKINS	State Boys' Club Agent
MISS DOROTHY EMERSON	Girls' Club Agent
MISS FLORENCE H. MASON	District Agent and Specialist in Home Furnishing
MISS K. G. CONNOLLY	Administrative Assistant
*G. J. ABRAMS	Specialist in Apiculture
W. R. BALLARD	Specialist in Landscape and Vegetable Gardening
H. C. BARKER	Specialist in Dairying
W. C. BEAVEN	Specialist in Marketing
W. E. BICKLEY	Assistant Specialist in Entomology
*H. R. BIRD	Specialist in Poultry Nutrition
*T. C. BYERLY	Specialist in Poultry
*R. W. CARPENTER	Specialist in Agriculture Engineering
O. R. CARRINGTON	Assistant Extension Editor
J. A. CONOVER	Specialist in Dairying
JOHN COTTON	Specialist in Soil Erosion
*C. D. COX	Specialist in Plant Pathology
*S. H. DEVAULT	Specialist in Agricultural Economics
*L. S. DODSON	Specialist in Sociology
LAWRENCE E. DOWNEY	Assistant Marketing Specialist
MYLO S. DOWNEY	Assistant in Club Work
*CASTILLO GRAHAM	Assistant Specialist in Entomology
*J. M. GWIN	Specialist in Marketing Poultry Products

*W. E. HARRISON	Assistant Specialist in Marketing
MISS JESSIE D. HINTON	Home Management Specialist
*H. A. HUNTER	Specialist in Canning Crops
*W. F. JEFFERS	Specialist in Plant Pathology
*R. A. JEHLE	Specialist in Plant Pathology
*MORLEY A. JULL	Specialist in Poultry
*W. B. KEMP	Specialist in Agronomy
A. V. KREWATCH	Specialist in Agricultural Engineering
*A. O. KUHN	Specialist in Agronomy
G. S. LANGFORD	Specialist in Insect Control
*F. H. LEINBACH	Specialist in Animal Husbandry
J. W. MAGRUDER	Specialist in Agronomy
*C. H. MAHONEY	Specialist in Horticulture
A. F. MARTIN	Assistant Specialist in Marketing
*W. D. MCCLELLAN	Specialist in Plant Pathology
MISS MARGARET MCPHEETERS	Specialist in Nutrition
*DEVOE MEADE	Specialist in Animal Husbandry
C. P. MERRICK	Specialist in Drainage
*J. B. OUTHOUSE	Specialist in Animal Husbandry
C. P. POPPELL	Assistant Specialist in Marketing
W. B. POSEY	Specialist in Tobacco
*HARLAN RANDALL	Specialist in Music
W. H. RICE	Specialist in Poultry
S. B. SHAW	Specialist in Marketing and Chief of Maryland State Department of Markets
MISS HELEN SHELBY	Specialist in Clothing
*M. M. SHOEMAKER	Specialist in Landscape Gardening
*C. B. SMITH	Specialist in Farm Management
*K. L. TURK	Specialist in Dairy Husbandry
J. M. VIAL	Specialist in Animal Husbandry
A. F. VIERHELLER	Specialist in Horticulture
R. H. VINCENT	Assistant Specialist in Entomology
*E. A. WALKER	Specialist in Tobacco Diseases
*E. P. WALLS	Specialist in Marketing and Canning Crops
F. B. WHITTINGTON	Assistant Specialist in Entomology
*CHARLES WILLIAMS	Specialist in Poultry
C. F. WINSLOW	Specialist in Forestry

* Part-time Specialists.

COUNTY AGENTS—1940

County	Name	Headquarters
Allegany	R. F. MCHENRY	Cumberland
Anne Arundel	STANLEY E. DAY	Annapolis
Baltimore	H. B. DERRICK	Towson
Calvert	JOHN B. MORSELL	Prince Frederick
Caroline	G. W. CLENDANIEL	Denton
Carroll	L. C. BURNS	Westminster
Cecil	J. Z. MILLER	Elkton
Charles	P. D. BROWN	LaPlata
Dorchester	WM. R. MCKNIGHT	Cambridge
Frederick	H. R. SHOEMAKER	Frederick
Garrett	JOHN H. CARTER	Oakland
Harford	H. M. CARROLL	Bel Air
Howard	W. G. MYERS	Ellicott City
Kent	J. D. MCVEAN	Chestertown
Montgomery	O. W. ANDERSON	Rockville
Prince George's	P. E. CLARK	Upper Marlboro
Queen Anne's	MARK MILLER	Centerville
St. Mary's	JULIUS JOHNSON	Leonardtown
Somerset	C. Z. KELLER	Princess Anne
Talbot	R. S. BROWN	Easton
Washington	M. D. MOORE	Hagerstown
Wicomico	J. P. BROWN	Salisbury
Worcester	R. T. GRANT	Snow Hill

ASSISTANT COUNTY AGENTS

Allegany and Washington	H. W. BEGGS	Cumberland
Baltimore	J. WHEELER ENSOR	Towson
Harford	W. SHERARD WILSON	Bel Air
Kent	STANLEY SUTTON	Chestertown
Montgomery	RUFUS KING	Rockville
Carroll, Frederick and Howard	CHARLES REMSBERG	Frederick
Caroline, Talbot and Dorchester	CHARLES FULLER	Easton
Queen Anne's	CHESTER CISSEL	Centerville

Local Agents (Negro Work)

Southern Maryland	MARTIN G. BAILEY	Seat Pleasant
Eastern Shore	L. H. MARTIN	Princess Anne

HOME DEMONSTRATION AGENTS—1940

County	Name	Headquarters
Allegany	MAUDE A. BEAN	Cumberland
Anne Arundel	MRS. GEORGIANA LINTHICUM	Annapolis
Baltimore	ANNA TRENTHAM	Towson
Calvert	ANGELA F. FEISER	Prince Frederick
Caroline	BESSIE M. SPAFFORD	Denton
Carroll	ADELINE M. HOFFMAN	Westminster
Cecil	HELEN I. SMITH	Elkton
Charles	MARY GRAHAM	LaPlata
Dorchester	HATTIE E. BROOKS	Cambridge
Frederick	FLORENCE E. WILLIAMS	Frederick
Garrett	MILDRED E. BARTON	Oakland
Harford	CATHARINE MAURICE	Bel Air
Howard	KATHRYN E. NEWTON	Ellicott City
Kent	HELEN E. SCHELLINGER	Chestertown
Montgomery	EDYTHE M. TURNER	Rockville
Prince George's	ETHEL M. REGAN	Hyattsville
Queen Anne's	HELEN HARNER	Centerville
St. Mary's	ETHEL JOY	Leonardtown
Somerset	HILDA TOPFER	Princess Anne
Talbot	MARGARET SMITH	Easton
Washington	ARDATH E. MARTIN	Hagerstown
Wicomico	JUDITH AULT	Salisbury
Worcester	LUCY J. WALTER	Snow Hill

ASSISTANT HOME DEMONSTRATION AGENTS

Allegany	MARGARET T. LOAR	Cumberland

Local Home Demonstration Agents

Charles, St. Mary's, Prince George's and Montgomery	MRS. ARMINTA DIXON	106 Rhode Island Avenue, Brentwood, Md.
	MISS DOROTHY RANSOM, Assistant	106 Rhode Island Avenue, Brentwood, Md.
Somerset	MRS. JUSTINE M. CLARK	Princess Anne

Changes in Personnel

Samuel L. Crosthwait resigned as Entomology Specialist, December 30, 1939.

Charles P. Merrick was appointed Drainage Specialist, January 1, 1940.

Calvin P. Poppell was appointed Assistant in Marketing, April 1, 1940.

Miss Thelma Ryan resigned as temporary Assistant County Home Demonstration Agent in Allegany County, May 31, 1940.

William E. Bickley, Jr., was appointed Assistant in Japanese Beetle Control Work, June 1, 1940.

Miss Margaret T. Loar returned from leave of absence to duties as Assistant County Home Demonstration Agent in Allegany County, June 1, 1940.

Miss Elizabeth R. Johnson resigned as Assistant County Home Demonstration Agent in Baltimore and Harford Counties, June 10, 1940.

Kenneth C. Ikeler, Animal Husbandry Specialist, left the Service, September 30, 1940.

C. E. Temple retired as State Plant Pathologist, September 30, 1940.

W. B. Kemp was appointed part-time Agronomist, October 1, 1940.

W. D. McClellan was appointed Assistant in Plant Pathology, October 1, 1940.

C. E. Cox was appointed Assistant in Plant Pathology, October 1, 1940.

Miss Frances E. Beegle was appointed Assistant County Home Demonstration Agent in Anne Arundel County, October 1, 1940.

Sources of Extension Revenue

DURING the fiscal year ended June 30, 1940, there were available for Extension Work the following funds: Federal Smith-Lever, $60,023.83; Bankhead-Jones, $105,496.71; Capper-Ketcham, $26,076.61; Further Development Funds, $3,740.00; State Funds for Agriculture and Home Economic Extension, $101,572.39; Special Dairy Funds, $2,936.52; Cantaloupe Fund, $1,500.00; State Horticultural Fund, $11,908.74; Strawberry Disease Fund, $2,755.24; Tobacco Disease Fund, $2,372.30; Bee Disease Fund, $680.17; Fund for Enforcement of Fresh Egg Law, $3,603.52; Soil Conservation and Drainage Fund, $2,517.16; Miscellaneous Funds, including Advanced Registry, State Department of Forestry Funds, Marketing Inspection Funds, etc., $56,891.45; and $70,579.50 contributed by the various counties; or a total of $452,654.14. In addition, $22,-431.62 was used for Insect Control Work, and $18,985.12 was disbursed by the U. S. Department of Agriculture; making a grand total of $494,070.88. Also, $40,000.00 was used from an emergency appropriation for Japanese Beetle Control.

During the present fiscal year ending June 30, 1941, there are available: Federal Smith-Lever, $60,023.83; Bankhead-Jones, $105,496.71; Capper-Ketcham, $26,076.61; Further Development Funds, $3,740.00; State Funds for Agriculture and Home Economics Extension, $97,685.50; Special Dairy Funds, $3,233.69; Cantaloupe Fund, $1,500.00; State Horticultural Funds, $11,545.56; Strawberry Disease Fund, $4,500.00; Tobacco Disease Fund, $4,500.00; Bee Disease Fund, $2,000.00; Fund for enforcement of Fresh Egg Law, $6,000.00; Soil Conservation and Drainage Fund, $7,500.00; Miscellaneous Funds (estimated), including Advanced Registry, State Department of Forestry Funds, Marketing Inspection Funds, etc., $50,000.00; and $73,125.50 contributed by the various counties; or a total of $456,927.40. In addition, there are available $18,542.75 for Insect Control Work, and $18,677.00 disbursed by the U. S. Department of Agriculture, making a grand total of $494,147.15.

Also, there is available about $40,000.00 for official Japanese Beetle Control Work in cooperation with the U. S. Bureau of Plant Quarantine.

Records and Equipment

As the work of the Extension Service has expanded and extended into additional fields and programs, the problem of maintaining adequate records and reports has become increasingly difficult. It has not been possible to make increase in secretarial force in proportion to the expansion of the work; in fact, it has been a problem to maintain the secretarial force at its former strength and efficiency, especially in competition with the rapidly growing defense measures being launched in this area.

The value of systematic records is fully appreciated and every effort was made to continue the policy of former years in which all activities and lines of work were fully reported. It has been especially important to avoid any break in records, since it has been the policy to prepare a summary of extension work each ten years.

Essential records pertaining to such matters as financial and budget affairs were handled in a satisfactory manner by Miss K. G. Connolly, Administrative Assistant, and her associates.

Only the most essential equipment, principally replacements, was added during the year, as funds would not permit acquiring some types of equipment that would have added to the efficiency and effectiveness of the work.

PUBLICATIONS

A NARROW limit was placed upon the publications issued during the year by the funds available. The requests for publications by specialists in the several lines of work was greater than ever before, due to some extent to the fact that it had not been possible to meet all of the requests in previous years.

In addition to the publications included in the regular series of bulletins and circulars, there was a demand for a larger number and variety of publications for special purposes in connection with programs that were in progress. Among them was a profusely illustrated booklet depicting the prize-winning costumes in the State 4-H Club Style Revue, with information and educational material pertaining to the clothing projects.

A series of illustrated printed letters was an important part of a joint project carried out by the specialists in agronomy, dairy and livestock, designed to impress farmers with the economy of producing and utilizing more home-grown feeds. The usual spray calendar for apples and peaches was issued. Announcements, programs, and other types of material were issued in connection with special events, such as Rural Women's Short Course, annual 4-H Club Week, Cooperative Marketing Institute, etc. Record books were printed for a number of extension activities.

The contribution of the public press in Maryland to the welfare and progress of agriculture is generally underestimated and by no means fully appreciated. Many editors and publishers have through a long series of years given whole-hearted and effective support to agricultural developments and have been a potent force in the progress that has been made.

The Extension Service, both by maintaining a news service at headquarters and through the agents in the counties, has endeavored to cooperate with the public press. It recognizes the help given by the press in its many activities and has endeavored to make that help just as effective as possible.

The Extension Service News was published monthly and mailed to approximately 3,000 leaders as a means of keeping them in touch with latest important developments, both as regards extension activities and affairs affecting Maryland agriculture. Special attention was given to presenting the latest information from scientists and investigators of the Maryland Experiment Station. At the end of the year, the workers in the counties had a fairly complete survey of the work in research that is in progress and from which they may expect results.

Cooperation With Federal Agencies—Press releases pertaining to programs being conducted jointly with Federal agencies were handled in conjunction with those of the Extension Service. This unified method proved much more satisfactory, and undoubtedly more efficient, than a situation in which local editors were confused by receiving materials from so many sources, and the several agencies were, in effect, in competition with each other for space in the public press. There was fine cooperation between the agencies concerned and, it is believed, the local press of the State was served adequately with a minimum of duplication.

In addition to cooperation of that type, the Extension Editors assisted in a number of other ways. Aid was given in planning, preparing and printing a bulletin issued by the State Soil Conservation Committee entitled "Save Your Soil." It was of a popular nature, profusely illustrated, and 10,000 copies were distributed. Late in the year, material pertaining to some of the defense and preparedness activities, especially the foods and nutrition phases, was the basis of conferences and the accompanying news and information.

Illustrations and Visual Aids—In the constant efforts to make publications more effective, illustrations of all kinds have an important part. Greater attention is given to that phase each year and more complicated layouts are attempted. The demand for other types of visual aids, such as charts and graphs, increases each year.

Radio—The Farm Flashes of the United States Department of Agriculture, with such local adaptation as specialists and agents desired to make, were sent to commercial radio stations in the State throughout the year. Beginning about the first of September, a daily program from Station WBAL in Baltimore was conducted. A microphone was placed on the campus and George Abrams was in charge of arranging and conducting the broadcast. In addition, he supplied that station with material for a portion of an early morning broadcast for farm people. While other programs were not conducted regularly, the several specialists and agents participated in a great many broadcasts during the year.

Publications Issued During the Year—During the period from January 1, 1940 to January 1, 1941, the following publications were issued by the Extension Service: Bulletin 85, "Song Classics," 32 pages, 5,000 copies; Bulletin 86, "The Art of Baking (Cakes and Cookies)," 24 pages, 5,000; Bulletin 87, "The Art of Baking (Yeast Breads and Rolls)," 16 Pages, 3,000; Bulletin 76 (revised), "Electric Equipment in the Home," 24 pages, 2,000; Bulletin 88, "The Japanese Beetle in Maryland," 20 pages, 15,000; Circular 133, "The Maryland Fresh Egg Law," 4 pages, 10,000; Circular 134, "Merchandising Eggs in Maryland," 4 pages, 7,000; Circular 135, "Maryland Chicks of Quality," 20 pages, 2,000; Farm Account Book, 1,000 copies; Spray Calendar

for Apples and Peaches, 3,300 copies; Booklet (planograph) "4-H Club Style Revue," 2,000 copies; Folder, "Rural Women's Short Course," 12,000 copies; Annual Report of the Extension Service, 88 pages, 2,000 copies; Extension Service News, 4 pages, 2,500 copies each month.

COUNTY DEMONSTRATION WORK

IN a strange world, shaken to its foundations by tragic events in Europe, rural people found Extension workers to be their most trusted advisors. Patiently, wisely, calmly, county agents guided farm people and advised caution. Agriculture was better prepared for the national emergency than any other industry. Strong rural organizations have developed over the years, farm products have been produced in great abundance. Adequate reserves have been accumulated. Farm people were advised not to splurge in the hopes that there would be a repetition of the war-time prices that prevailed during the first world war, when world conditions were greatly different.

By every means, the facts were presented to farmers—during meetings, by radio, in the press, by circular letters, by personal contact. This was not a time to expand agriculture, nor to incur additional indebtedness, not to sacrifice conservation—not a time for speculation. Because of their long years of wise and faithful leadership and service, and because Extension workers have gained the complete confidence of farm people, their sound advice was accepted.

Leadership Developed—Among the most outstanding accomplishments was the development of leadership ability among the farm people. Strong and aggressive farm organizations have developed. Membership in the Farm Bureau exceeds 5,000, with an active Farm Bureau in each county. In most of the counties Granges have been active. The informed and active membership in these organizations provides able leadership for Extension work. Interest in cooperative marketing and purchasing organizations has grown tremendously. This interest was crystallized in a two-day cooperative institute during the summer. Many active community and commodity organizations have also contributed to the development of rural people to help solve their own problems. Extension workers have actively assisted in the affairs of civic organizations and have contributed

greatly to civic improvement and better urban-rural understanding.

Program Planning—A strong, informed and aggressive leadership developed under Extension guidance has contributed greatly to the planning of programs by farm people themselves. Rural people in Maryland plan their own programs. Advisory committees met during the year to counsel with subject-matter departments in developing commodity programs. Marketing committees were active in the Baltimore area and in Southern Maryland. Programs were developed by committees of the Farm Bureau, Grange, crop and livestock improvement associations, county advisory committees, and State and county land use planning committees. Strong organizations and strong program planning go hand in hand. Extension work in Maryland is blessed with both.

Coordination of Activities—A corollary to sound program planning is coordination of activities. The Extension Service in Maryland has accepted and, in fact, welcomed this responsibility. One of the greatest functions of county agents has been to interpret and adapt to local conditions the many new and complicated programs designed to help farmers with their social and ecomonic problems. These programs have succeeded to the extent that county agents have been permitted to guide and adapt them. They have coordinated one with another and with the "over-all" Extension program to the extent that national administrators have been willing for them to be coordinated locally.

In Maryland, the county agents have unhesitatingly accepted the leadership in each of the new programs and in every way possible have given their people an understanding of the functions and services available through each of the new agencies. With the advice and assistance of farm leaders, county agents have developed systematic programs of work designed to correlate all activities in the solution of major problems within their respective counties. Land Use Planning Committees have been very helpful in studying local problems and fitting together the contributions of all agencies in solving those problems.

County agents have served as secretaries of local committees of each agency and, in addition, they have been an integral part and taken the lead in forming the program of each community

organization. Thus, they have exerted a tremendous influence in coordinating all activities with farm people.

Conservation—The growing public consciousness of the need for conservation is another noteworthy achievement of Extension workers in close cooperation with the personnel of other organizations. In its role of leading adult educational institution, the Extension Service has taken the lead in publicizing the conservation problem in every way possible and educating people generally as to its implications. Soil Conservation Districts were formed in more than 25 percent of the land area of the State and interest was created for organizing districts in three or four additional counties. The district programs are taking hold and conservation measures are rapidly being adopted by farmers. The AAA program continues to be accepted by a great majority of Maryland farmers who are making every effort to improve their soil. The use of lime and phosphate is being expanded to improve pasture and forage crops. Much needed drainage of once fertile farm lands is being accomplished with the aid of four CCC Camps. Advisory fish and game committees have been active in all counties. Forestry conservation has received a new impetus by the programs of the two forestry areas under the new forestry act and a "sustained-yield" policy of woodland management is being accepted rapidly by forest owners.

Production and Marketing Problems—Education in production problems is still recognized as a basic need and has received a great deal of attention by county agents. In fact, because the newer programs have become well organized and are operating smoothly in Maryland, it has been possible for county agents to devote a greater percentage of time to basic production problems.

Introduction of newer practices and techniques in the growing of quality products and in grading and marketing these products has been emphasized. The introduction of new varieties, the teaching of newer methods of disease and insect control, better cultural methods, in fact, "to make the best better" has been the objective of this work.

Foremost among farm problems is that of marketing farm products. That problem is both a local and a national problem. Extension workers have approached it in many ways. Market-

ing begins with production and preparation for market of high-quality products. Demonstrations were conducted in proper grading and standardization, assistance was given in disposing of surplus commodities, active support and assistance were given to marketing organizations, particularly those marketing co-operatively, and guidance was furnished to committees set up to improve marketing facilities and practices in Southern Maryland, Baltimore, and other areas.

County Extension Agents—There was a county agent in each county throughout the year and seven assistant agents served eleven counties. Two local colored agents served Negro farmers in areas where they were most numerous and in other sections they were served by the white agents. A staff of highly-trained specialists in various subject-matter fields assisted the county agents in making available the latest information, both to the white and Negro farmers. The programs and work in the counties were under the supervision of the Assistant Director of Extension and the County Agent Leader.

HOME DEMONSTRATION WORK

NOT so many years ago it was possible to convey a fairly accurate impression of the progress in extension activities with rural women and girls by a summary of their more strictly women's affairs, such as clothing, cooking, canning, and the like. Today, the women are engaging actively in such a broad program dealing with all phases of family life and welfare that the results cannot be summarized or evaluated with any degree of adequacy.

Helping to better the rural home and family continued to be the basic aim. The program carried out in the several counties to accomplish that aim was determined largely by the local people in accordance with their local conditions. In that way it was assured that emphasis was placed on what they believed to be the greatest needs. They continued to carry forward the programs in the fundamentals of homemaking, and at the same time took an active part in programs designed to improve the economic status of farm families, and sought greater opportunities for cultural development.

Extension workers found a new response and a new interest on the part of both the local leaders and the individuals who

participated in the programs. Every project carried showed results and, as soon as it was completed, there was something bigger to be done.

"Better Family Living"—At the time this broad program was started a number of years ago under the general theme of "Better Family Living" there was no thought of the sound basis it was laying for some of the most important activities in the emergency program inaugurated during the past year. It was the aim to encourage homemakers to utilize their available resources so that the family could enjoy health and comfort. Help was given by the specialists in both agriculture and home economics to make the home more attractive outdoors and indoors at small expense. Toward the end of the year, the importance of conserving human health and of producing at home an ample supply of the foods essential to healthful diets became an important part of the defense program. Through their efforts, training and experience in the Extension program, rural women in Maryland had prepared themselves for carrying forward such a program most efficiently. Likewise, the hundreds of leaders throughout the State who have been trained in various phases of extension projects are ready and able to assume leadership in whatever programs may be necessary. Perhaps the greatest accomplishment through the years by Extension workers is what they have achieved in helping people to help themselves and in the development of leadership.

The past year found many more Maryland families raising their own food as a result of special efforts in the interest of better gardens and better food for the family. Where a farm family produces its own fruit, vegetables, poultry, eggs and dairy products, all of which help to reduce the grocery bill, the family has a better standard of living, not only financially, but from the standpoint of health.

Many changes were made in farm homes in the last year. Electricity was installed and it brought many other changes. Among them were washing machines, stoves, and other electric equipment, which contributed to a better standard of living and a happier family life.

Attention was focused during the year on home management and nutrition. A summary of work in these lines is included later in this report, as is also a summary of work in clothing, home furnishing, and with rural girls.

Cultural Projects—These have become a recognized part of home demonstration programs. As one women aptly expressed it, "We are now having a glimpse of some of the things that it was once thought only our town sisters were interested in." Hundreds of homes have been made more beautiful by the landscape gardening program. Such a project gives all members of the family a chance to participate and enjoy results.

Things that have been accomplished in the cultural project may not have money value, and they may be intangible, but the satisfaction that comes to the homemaker and to all members of the family after reading better books, knowing good music, good pictures, taking part in recreational activities, standing on their feet and talking about the things they enjoy and love has done something to the entire home that cannot be measured in dollars.

A program carried out this year, which proved especially timely and effective, was designed to promote a better understanding of our Latin-American neighbors. A series of lessons prepared by persons well acquainted with the several Latin-American countries was supplied to homemakers' clubs for study and discussion at their meetings. The study proved very popular and much additional reading was done in connection with the study and discussions. Without question, it resulted in a much better understanding on the part of hundreds of women of their neighbors to the South, and aroused an interest in further study.

Achievement Days—A gratifying feature of achievement days was the distinct evidence of leadership displayed. The younger women participated in the programs, as well as in planning exhibits and discussing subjects that heretofore they felt only professional people could discuss. Sixty-two adult and 104 4-H club achievement days were held. Attendance and interest set a new record. The achievement day program offers homemakers ideals and standards and something to live by throughout the year. They now appreciate that this is their day, their program, and their opportunity to express appreciation of what the Extension Service has done for them.

Rural Women's Short Course—The enthusiasm, the inspiration, the sincerity, and the pleasure which radiates from the 800 women who attend the Rural Women's Short Course cannot be conveyed in any sort of report. Through the eighteen consecu-

tive years that it has been conducted, it has become a vital part of home demonstration work and an influence that cannot be measured. The program is planned to give every homemaker attending something that is inspirational, practical and helpful in improving the home life of rural women. It gives them a better understanding of what education means, an opportunity for development of leadership, and a broader vision of what lies ahead in adult education. Women attending this week of instruction carry back and share with their neighbors and members of home groups the lectures and demonstrations that they enjoy. Thus, it is a potent and constantly growing influence throughout the years.

WORK WITH NEGROES

The "Better Family Living" program was featured by the three Negro home demonstration agents and proved very helpful to a large number of families. It emphasized the importance of home gardens, poultry and food preservation and did much to help Negro families live through periods when there was little or no work to be had, especially in the counties where the Negro's work is seasonal, such as working in canneries and helping to pick beans, cucumbers, cantaloupes, and strawberries.

One community in Prince George's County with 25 families of colored people is working on a Live-at-Home-Community project. Both the agricultural and home demonstration agents have worked out simple records for all 25 families to keep. Some of them are to raise hogs, a certain number are to raise poultry, and all are to raise gardens. A small percentage own their homes, with small acreage connected with them, and the demonstration is being watched with great interest.

Health and sanitation were other important parts of the program for Negroes, and clothing had its usual place. Through a mattress and comforter project, better bedding was provided for many families.

There was an enrollment of 1,183 in 54 homemakers' clubs. A short course was held for Negro women at the Princess Anne College, and also a 4-H camp for colored boys and girls.

CLOTHING

THE general objective in clothing extension work was to assist rural families in working out plans for providing a desirable standard of dress so that all members could go about

daily tasks and social activities with greater efficiency, more poise and satisfaction. One important phase in working toward that objective was providing information necessary for developing judgment in selection and buying of becoming and suitable clothing, so that money was well spent. Another was assistance in gaining sufficient skill in the construction of clothing that satisfaction and efficiency were experienced.

Some of those who took part in the style revue during Club Week. From the left: Katherine Myers, Carroll county; Joseph T. Callis, Caroline county; Eleanor Bird, Prince George's county.

The clothing buying situation becomes difficult with the increasing variety of clothing fabrics. Rural women are interested in keeping abreast of developments in the textile field as they affect their ability to get good value for their money. At the same time, making clothes at home is recognized as a means of providing a better standard of dress on a limited income.

In helping rural women along the two general lines mentioned, they were given information and demonstrations on fabrics as to

kind, quality and care; family wardrobe planning; development of skill in making clothes; improved methods in the care of clothes; improvement in equipment for making clothes and for pressing; greater attention to factors determining becoming dress; better foot health through selection of shoes and foot exercises; and, better appearance through good grooming and inproved posture.

In spite of a somewhat common belief that women do not make clothes today, there was a substantial increase in the number of women who followed recommendations on the construction of clothing in 1940, as compared with the two preceding years. There was also an increase in the number who mended or remodeled clothes.

Programs planned by homemakers reflected their interest in good grooming and posture. They recognize good grooming as one of the most important means of acquiring a reputation for being well-dressed. Simple and inexpensive methods for a neat and well-groomed appearance were demonstrated. Points on good posture in walking, standing and sitting were also presented, with exercises for various figure defects and to relieve fatigue. Reports from the agents in the counties give definite evidence of the interest shown by rural women in these subjects and the progress made by them with the aid of extension information and demonstrations.

Help in making garments for children continued to be among the most appreciated parts of the clothing extension work. While definite records were not obtained, it is known that a kit of garments, patterns, etc., that was provided home demonstration agents proved very helpful in assisting mothers to provide suitable clothes for their children. The young mothers found this type of material especially helpful.

FOODS AND NUTRITION

HEALTH is being brought before the public more and more as one of the big objectives of the nation. The position that food occupies in health, and the general economic welfare of farm families, has continued to have a definite influence on the foods and nutrition program. The fact that food constitutes the major item in farm family living and that the cash spent for food purchased is the major item in money expenditure indicates

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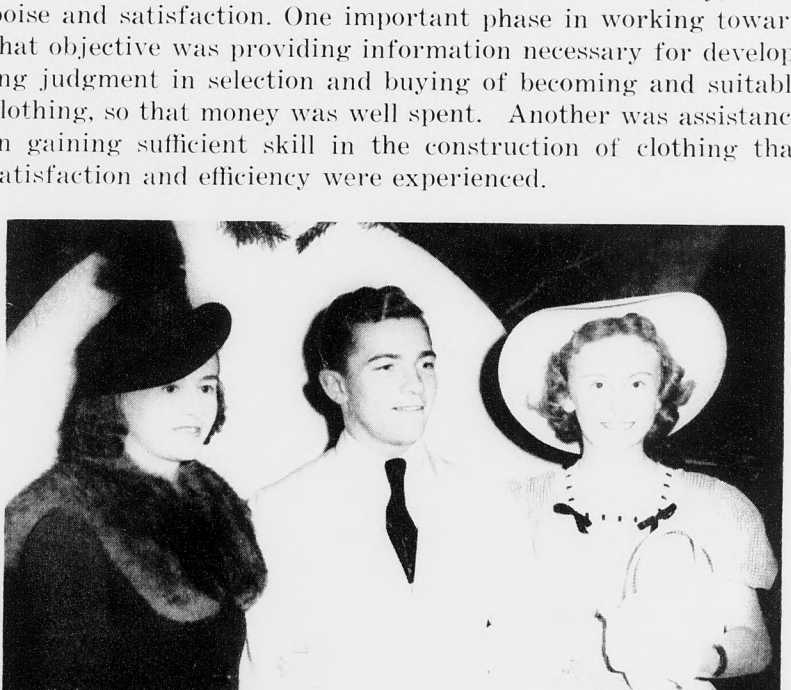

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the importance of better planning of the family food supply and wise spending of cash for necessary staple foods.

The foods and nutrition work was correlated closely with health problems of the State Department of Health, and the Farm Security and Social Welfare Departments. This phase of the work reached many people in poorer circumstances whom it has seemed impossible to reach in other ways.

Some of the aims during the year were to help farm families develop a yearly food supply plan for better health, including production of adequate gardens, meat animals, poultry flock, and milk supply for family needs; help them to preserve a yearly food supply; assist them in maintaining good standards of living on a limited income through better buying practices and better utilization of home products; help families keep records of food expenses; help homemakers add cash to the family income by producing standard products and marketing them; and promote interest of young mothers in child feeding problems.

Foods and nutrition work was conducted in 420 communities. It is impossible to determine just how great was the influence of extension teaching, or how many people it affected, as only a small percent, probably not more than 40 percent, reported results. Records received show that 2,461 families report working out their yearly food budget and then producing and preserving the required amount; 3,680 families report assistance in canning or otherwise preserving their fruits, vegetables and meats; women and girls report the canning of 521,668 quarts of fruits, vegetables and meats, and 180,126 other containers such as preserves, jellies and relishes; 1,974 families followed recommendations for better storage of their food supply; 2,673 families were assisted in readjusting their family food supply by timely economic information; 589 families budgeted their food expenditures for a year; and, 2,503 families improved their food buying practices. Even a greater interest than in past years was evident in the planning and serving of well-balanced meals, both by adults and 4-H club girls.

The school lunch work was confined more closely to rural one and two room schools. Recommendations for a hot dish or hot lunch were followed in 195 schools to the benefit of 6,088 children. In addition, 1,974 mothers reported improvement in home-packed lunches as a result of recommendations.

HOME FURNISHING

MANY people have found that dissatisfaction with their furnishings and home environment are caused more by poor selection, due to lack of understanding of well-designed articles, than by lack of money. Demonstrations of actual comparisons in selections of furnishings have shown that in the lower price range the better designed articles cost no more, and in many instances are less expensive. This type of training and information is especially important to older youth, as it is very costly and poor economic practice to allow youth to furnish homes of their own before they discover the standards of design that give harmony and satisfaction to their home environment.

Interest in better design and improved furnishings has developed interest and initiative in housing as related to home furnishing. This interest so far is mainly in the field of alterations and repairs, but, as the housing shortage becomes acute in certain areas, information on the low cost home and use of fabricated materials assumes greater importance.

Efforts to assist rural people in providing more satisfying home surroundings necessarily require a wide variety of activities. They involve the development of skills in doing many things and appreciation of what is good in many lines, such as pictures, color harmonies, lighting, etc., as well as the best plans and arrangements of facilities from the standpoint of economy of time and strength, and efficiency in carrying on the household tasks. All of the home furnishing projects are planned with the objective of a home environment for developing better family life and individual interests, habits and skills to make self-sufficient people who can contribute to the progress of their communities.

Reports show that during the year 2,504 families made improvements in selection of household furnishings; 1,950 families followed recommendations in improving methods of repairing, remodeling, or refinishing furniture; 2,119 families made use of recommendations for improving the treatment of their windows, such as shades, curtains and draperies; 2,502 families improved the arrangement of rooms, other than kitchens; 2,434 families improved the treatment of woodwork, walls and floors; and 2,469 families were helped in applying the principles of color and design in improving the appearance of their rooms. Through the instruction and demonstrations under this project, many

members of rural families have acquired high degrees of skill in a number of lines, such as making slip covers, restoring and refinishing furniture, making spring units for cushions, and the like.

HOME MANAGEMENT

THE standard of living that can be provided in the home is so closely associated with the income from the farm that management problems are a family affair. In addition to the problems involved in planning and operating the home efficiently, homemakers are taking more and more interest in economic and business affairs.

It has been the broad objective in home management extension activities to help rural women make their homes more satisfying and efficient in keeping with the resources available, and also to give them a better understanding of business methods and procedures.

By means of a simple record book, which provided for keeping records for both the home and the farm, a substantial start was made toward placing planning and management on a family basis. While the number of such records completed the first year was not large, as it is increased in future years it will not only provide farm families with sound basis for planning their farm and home affairs, but will create a better understanding of the common problems by all members of the family, and greater cooperation in solving them.

Money management, time and energy management, and kitchen improvement were given greatest attention during the last year. Homemakers were given a better understanding of simple banking practices, the use of different kinds of consumer credit, the privileges and obligations of property ownership, principles underlying life insurance, and the place of property insurance in the management of the home and farm. Local professional men in the several communities were of great help in presenting the legal, banking, and insurance information.

Along with giving homemakers a greater appreciation of the importance of planning to conserve their energy and time, practical demonstrations were arranged in which methods were shown for lightening some of the most time and labor-consuming tasks about the home.

In most cases, the improvement in kitchens took the form of rearrangement to make them lighter, more airy and cheerful,

to provide better storage space and correct working heights, and to eliminate unnecessary travel and stooping. A growing interest was evident in the choice and use of electric equipment.

Perhaps no phase of extension work spreads more rapidly than the improvements and rearrangements in the home. One improvement leads to another in the individual home, and neighbors study their own conditions with a view to possible improvements they can make. As the report from one county states, "The most general result of this project has been to make the women look at their kitchens with the wide-open eye of a critic, rather than the blind eye of custom."

GIRLS' 4-H CLUBS

THE Girls' 4-H Clubs report a year of successful achievements and community service as their part in the Extension program.

Homemaking demonstrations (clothing, foods and nutrition, home furnishing, home management, gardening, etc.), were worked out by the girls and their leaders with the objective of providing a fuller life in their present situations, and also supplying standards, knowledge and skills that will be needed as the girls make homes of their own.

Outside support of 4-H club work is growing stronger, and the girls and homemakers are working together on community activities. The 4-H girls who have come up through years in the work are becoming natural leaders in the adult extension program and are helping to bring about the growing unity between youth and adults, which is helpful to both groups. Volunteer leadership of 4-H clubs by women of character is increasing and local leaders are receiving greater recognition. Special attention was given to training local leaders as a means of extending and strengthening 4-H club work with the girls of the State.

The number of girls enrolled and the number who completed their demonstrations in the several projects are shown in the following tabulation:

	Enrolled	Completed
Beautification of Home Grounds	270	246
Clothing	4,354	3,714
Food Preservation	1,554	1,308
Food Selection and Preparation	1,924	1,598
Handicraft	871	841
Home Gardens	334	256
Home Management	719	665
Home Furnishing	208	185
Poultry	175	151

The trend has been toward simple demonstrations, with subject matter prepared in such form that local leaders and girls could carry them out by themselves, and toward an increasing number of subject matter schools for club members where intensive training could be given to those who wished to do extra work, especially during the summer.

Miscellaneous Activities—While the achievements in more strictly homemaking projects can be summarized and expressed more definitely, it must be recognized that girls who engage in 4-H club work are the most active and progressive girls in their respective communities. Every county in the State reported during the year, not one but many instances of community activities and cooperation between the 4-H members and the adult and other youth organizations in their rural communities. Since these activities are determined largely by the members and their leaders in the several communities, it is inevitable that they include a wide variety. They include exhibits and demonstrations at local, county and state events; banquets; contributing flowers to a local sanatorium; making layettes for European refugees; rearrangment and care of library in school; and many other activities which appear to serve a definite need. As stated by one observer, "Our 4-H club members do not need to study courses in citizenship; they are participating in citizenship."

Some of the intangible results of the year's work which are difficult to express in a report are: Training in parliamentary procedure; social training and social contacts most valuable to the isolated rural girl who needs the stimulus of cooperative effort with girls of her own age; contact with adult leaders of character; fine ideals to live up to; and, opportunities for self-expression and public speaking before large audiences.

Camps—This year, more than any other year, there were camps bringing large county groups together. Frederick and Carroll counties camped together—one hundred girls and leaders; Caroline, Kent and Queen Anne's counties—about one hundred; close to one hundred older youth of the Western Shore at the University of Maryland permanent camp at Pleasant Valley. Such camps are bringing the people together and creating unity. Harford county continues to be the one camp for both girls and boys, and, as always, was a complete success.

If you ask girls what meant the most to them in camp, they usually mention new friendships first and vesper services next. If you ask leaders what meant most to their girls, they speak of the adjustments the girls have made to the society around them, the ability they have gained in cooperating and subordinating themselves; or, for some girls, it may be the confidence gained in finding that they have talents and abilities acceptable to the group.

Maryland representatives at the National 4-H Club Camp in Washington, D. C. From the left: Mary Tucker Lusby, Kent county; Ray Hutchinson, Talbot county; Dorothy Emerson, Girls' Club Agent; Mylo S. Downey, Assistant State Boys' Club Agent; Staley Hahn, Frederick county; Pauline Virginia House, Allegany county.

Camp programs were planned to give the girls the kind of material there is not usually time for during the other weeks of the year. Camp leaders teach many points in etiquette, grooming, morale, and the like in camp conferences. It is the most opportune time in the year to reach individual girls.

State Club Week—Four-H Club Week at the University of Maryland is definitely a democratic institution. It grows out of group thinking, planning, and achieving. In fact, the difficulty

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is to find responsibilities enough to satisfy the great demand on the part of young people and local leaders to be of service. This may not make for greatest efficiency, but it gives practice in the working of a democracy. Certainly it is true that one enjoys an activity more when he has a part in making it successful.

Special emphasis was placed on the Maryland Safety Program. Demonstrations, public speaking contests and other safety features were included. The theme of Club Week, "The Safe High Way," lent itself admirably to the spiritual services in pointing out the higher way of life as being the safest and best way for all.

The Style Revue was again a beautiful and professional presentation. To be conscious of wearing the right clothes and being well groomed goes a long way in giving young people a feeling of confidence that enables them to appear at their best.

Senior Councils—The accomplishments of the Senior Councils may not be of the type that can be measured in figures, either now or ever, but it is significant that along with their natural desire for recreation and companionship these young people are finding mates and building homes that are outstanding for their happy adjustment and standards of American living, homes that are going to send forth young people who will be equipped to carry on to the next generation the principles on which this country was founded.

Older youth are learning the discussion method through their meetings and thus preparing themselves for important leadership in their respective localities as the national defense program developes. Rural youth are calling upon adults in their communities to explain local government, county history, tested methods of farming; they are finding speakers from their own membership in the business and professional world; and, they are constantly organizing county-wide events for the specific purpose of providing for the younger club members. It is certain that young people with this kind of inclination and training are not going to stop leading and standing for principle when they become of age, and that they will be citizens who stand in the first line of defense for democracy by practicing it in the smaller units of home and commuinty.

Maryland youth are taking an increasingly active part in interstate youth gatherings, such as the Tri-State Conference

and the Country Life Conference. A fine representation attended the State 4-H Council meeting in Baltimore in January and the meeting held in connection with State Club Week in August.

BOYS' 4-H CLUB WORK

THAT 1940 was a banner year for Boys' 4-H Club Work is indicated by the increased enrollment and number of boys and girls who completed demonstrations, by the increase in important projects, by the high quality of livestock and dairy cattle and other projects owned, and by the high rank achieved in State and national contests and activities.

County agents reported 4,932 boys and girls enrolled, the largest number in any year since the work was started. Of these, 4,218 (85.5%) completed 5,471 projects. Interest in the various types of projects is indicated by the following tabulation:

	Live-stock	Dairy	Poultry	Gardens	Crops	Other
Number Enrolled.....	947	831	767	1,219	384	1,165
Projects Completed.....	813	731	678	973	318	970

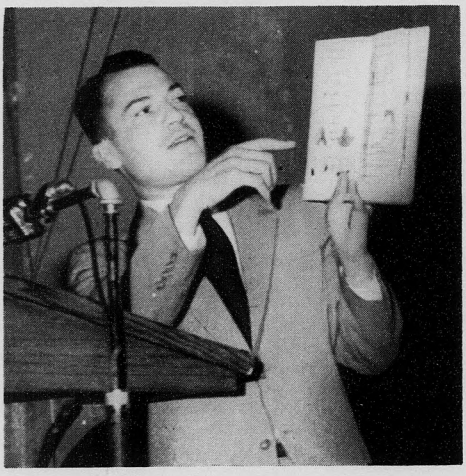
The work done and the training received by individual boys and girls in carrying to completion the different projects constitute the basic value of 4-H club work, but such value is very difficult to estimate or express. The fact that nearly 5,000 boys and girls put forth their best efforts in doing worth-while things, under trained leadership and supervision, entitled it to rank among the most important educational endeavors in the State.

Associated with the practical demonstrations conducted by the boys and girls, club work affords many opportunities for inspirational activities and for developing character and leadership, all of which are parts of the benefits derived from it.

Club Week—Among the most inspiring and vitalizing events of the year was the annual five-day meeting of youth at the University of Maryland in August, which was attended by 650, the largest number on record. In addition to the usual demonstrations and classes in such subjects as dairy, livestock, poultry, electrification, foods, home management, home furnishing, clothing, crafts and music, a course in rifle marksmanship was given under the direction of the National Rifle Association.

Safety in the home, on the farm, and on the highway was featured throughout the week by addresses, public speaking con-

tests, and safe driving demonstrations. Monro Leaf, well known as the originator of "Ferdinand," was among the speakers. This was a climax to a safety program that was carried out by 4-H clubs during the year.



Monro Leaf, creator of "Ferdinand," as he talked to the young people during Club Week.

Fairs and Contests—Contests of various kinds have always been an important factor in the development of 4-H club work. By matching their skill against each other and against that of others, club members provide a measure of their progress. A number of outstanding records were made by Maryland club members in 1940.

The contribution they are making to the fairs and exhibits of the State is indicated by the number participating in the Timonium Fair. There were 13 county dairy judging teams; 5 county dairy demonstration teams; 12 county poultry judging teams; 4 county poultry demonstration teams; 7 county horse fitting and showing teams; 163 dairy cattle exhibited by 83 club members; 120 hogs by 64 members; 34 baby beeves by 25 members; and 25 members participated in a livestock practice judging contest. The swine exhibit exceeded any previous club show in both number and quality of entries.

The State dairy cattle judging team placed fifth and the demonstration team was first at the National Dairy Show. The demonstration was unique in that a calf, an individual pen, and other accessories used in the demonstration were transported from home in a trailer. Poultry judging and demonstration teams were sent to the NEPPCO Exposition at Atlantic City, where they placed in the superior and good divisions, respectively.

At the Baltimore Livestock Show, Maryland boys exhibited and sold 67 steers, 90 hogs, and 36 lambs, whereas six years ago only four or five steers were shown by club boys of this State.

A 4-H club boy had the grand champion steer of the entire show. Maryland club-owned steers won half of the first places and two breed championships. They won 52 percent of all prizes in the open 4-H club baby beef club show. The champion individual and trio of fat barrows were fitted and shown by a club boy.

When the team from Frederick county won the livestock judging contest and then placed first in the national contest in Chicago, it reached a goal that had never before been achieved. It was the first time that a team from an eastern state had won the national non-collegiate championship at the International Livestock Exposition.

Cooperating Agencies—The active interest of a number of agencies in the progress of 4-H club work is indicated by their liberal contributions in various ways. Through their sponsorship, it was made possible for Maryland 4-H club work to be represented in several national events. Twelve club boys were representatives of the State at the National 4-H Club Congress in Chicago. Among their sponsors were, the Horse and Mule Association of America, the Baltimore and Ohio Railroad, the Rotary Club of Ellicott City, and the Maryland Bankers' Association.

Safety Program—A comprehensive safety program was adopted as a 4-H club activity early in the year. Much of its success was due to the splendid cooperation of the National Highway Education Board. Some phase of safety was featured at many of the club meetings, including discussions, demonstrations, roll call responses, scrap books, etc. Eighty safety demonstration teams and ten contestants in public speaking completed at Club Week.

Older Rural Youth and 4-H Councils—Much consideration was given to supporting the widespread movements to reach and help older youth. For many years there have been groups or clubs of rural older youth in the Maryland 4-H club organization. This year there were 18 such groups reported in 16 counties. Sixteen of these groups are functioning as Senior County Councils. Membership in all the groups increased from 962 in 1939 to 1,091 in 1940. The Maryland State Council of 4-H Clubs, composed of delegates from County Councils, held two regular meetings.

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Older Rural Youth and 4-H Councils—Much consideration was given to supporting the widespread movements to reach and help older youth. For many years there have been groups or clubs of rural older youth in the Maryland 4-H club organization. This year there were 18 such groups reported in 16 counties. Sixteen of these groups are functioning as Senior County Councils. Membership in all the groups increased from 962 in 1939 to 1,091 in 1940. The Maryland State Council of 4-H Clubs, composed of delegates from County Councils, held two regular meetings.

Reports from the County Councils indicate that they have been active in providing leadership for junior clubs and volunteer service at picnics, fairs, field days, and other Extension Activities. Older youth have also taken more or less initiative in carrying out their own programs. In a few cases, they have helped with general educational and action agency features of county programs and in some cases they have undertaken some program independent of adult agent suggestion, planning, supervision, or direction.

The Montgomery County Council is affiliated with the American Country Life Association Youth Section. A number of delegates from Maryland attended the annual meeting of the Association at Purdue University.

A Tri-State Older Youth Conference at Braddock Heights was quite a success and fairly well attended by 4-H older youth.

The 4-H Councils and All Stars fostered a successful 4-H club tour to the New York World's Fair, in which 66 made a conducted tour.

NEGRO CLUB WORK

Enrollment increased 77 percent, due in large measure to resumption of greater activity in Southern Maryland. The work on the Eastern Shore continued to be most helpful to the people in that section. Many 4-H club members have valuable projects and the local agent estimates the value of his 1940 club work at more than $50,000. In addition to farm projects, club boys and girls are improving school grounds, engaging in safety education and demonstrations, listening to 4-H club radio broadcasts, using public libraries and reading farm journals more seriously, and are developing singing clubs. A new project is an older youth club with a major community program of restoring and beautifying the local cemetery.

Approximately 125 delegates and leaders from the Eastern Shore and Southern Maryland attended a short course for Negroes at Princees Anne College in July. The educational program consisted of instruction and practice in shop work, gardening, landscaping, swine and poultry management, foods, and arts.

One of the most commendable pieces of work in gardening was supervised by a local teacher of vocational agriculture. The boys did all phases of the work from making a compost heap to planting and caring for the crops.

AGRONOMY

FIVE major projects were carried out in an organized way, in addition to services of a wide variety, mostly in response to requests. The five projects were: Livestock Feeding and Home-Grown Feed Production; Pasture Improvement; Hybrid Field Corn; Soil Fertility Maintenance and Improvement; and, Improved Seed.

Home-Grown Feed Production—Nine counties took part in this program, with 2,906 farmers enrolled. Greatest emphasis was placed on production of plenty of good quality forage (pasture, hay and silage), and the proper feeding of livestock for economic production. After the farmers who desired to participate had been enrolled, plans were worked out with the county agents and local committees for holding one or more two-day feeding and feed production schools in each county. Nine letters containing timely information on various practices and phases of the program were mailed at intervals to all participating farmers. Farm tours were conducted, where the effect of recommended practices could be observed. Twenty pasture demonstrations were started in 1940, and many of the farms on which they are located were included in the tours.

Pasture Improvement—A survey of Maryland pastures in 1935 showed that not more than 10 percent of the farmers limed or fertilized their pastures regularly, while about 30 percent applied barnyard manure occasionally. Grazing all year, or until late in the fall, was common practice. With this situation in mind, along with the fact that pasture is the most economical feed for livestock in Maryland, a special effort was made to emphasize this phase of the home-grown feed program. Among the points given greatest attention were: Importance of pasture as a cheap source of feed for livestock; need for and use of lime and fertilizer in pasture improvement; necessity for having soil tested; sources of lime and fertilizer; and, use of conservation payments in securing lime and fertilizer. These points were presented at meetings, demonstrations, through letters, and otherwise.

Hybrid Field Corn—Popular interest in field corn hybrids is increasing each year as experimental trials show more hybrids to be superior to local open-pollinated corn in yield, standability,

and soundness. Hybrid corn acreage in Maryland is increasing rapidly. Among the most important considerations is to assist farmers who are interested in growing hybrid corn in obtaining seed of hybrids which are known to be adapted to conditions in this State. A list of good hybrids was prepared and made available for distribution to all who desired it.

Twenty-four hybrid seed corn demonstrations were conducted in 20 counties. Field corn hybrids which showed superiority in Experiment Station tests were placed in these farm demonstrations and compared with local open-pollinated corn grown under ordinary farm conditions. Results of the demonstrations have been grouped by areas where similar soil and climatic conditions prevail. Field meetings held in connection with the demonstrations were an effective method of pointing out the characteristics of different hybrids. Success in helping farmers to plant the right kind of hybrids is indicated by the fact that the hybrids recommended in the list sent out by the Extension Agronomist were completely sold out as much as four or five months before planting season.

Soil Fertility—Farmers desiring to improve their soils for more efficient crop production were provided specific recommendations based on analyses of soil samples and the histories of the fields from which the samples were taken. This service, which has been conducted in cooperation with the Experiment Station for a number of years, has proved valuable to both the farmers and the Extension Service. The farmer receives the information he desires and the Extension Service gets first-hand information as to most important soil problems. During 1940, analyses of 6,184 soil samples were made by the Experiment Station, and recommendations were made on the basis of results and other information. This definite service was in addition to the several programs which have a more or less direct bearing upon the maintenance and improvement of soil fertility.

Improved Seed—Inspection and certification of seeds for field crops is under the jurisdiction of the Extension Agronomist and has been made an effective means for seed improvement. Definite standards for seeds of a number of crops have been established for several years and standards for hybrid corn were added to the list in 1940. Inspection and certification included barley, wheat, rye, oats and corn.

The Monobarb variety of barley was so badly infested with loose smut in 1939 that only one field met requirements for certification. Approximately 300 bushels of seed from this field were treated with hot water. When the 81 acres planted with this seed were inspected in 1940, only two smutted heads were found. More than 3,000 bushels of this smut-free barley was certified in 1940. A record was kept of its distribution and, if it continues to remain free from smut in 1941, an effort will be made to replace as much as possible of the infested acreage.

Four portable cleaning and treating machines are now operating in Maryland and are cleaning and treating about 50,000 bushels of grain each year. There is a noticeable reduction in the amount of weeds, particularly corn cockle, in wheat fields where these machines have been used.

Cooperation With AAA Program—The provisions of the AAA program for helping farmers to use lime and fertilizer and to plant legumes and grasses has greatly strengthened the program of the Extension Service. Likewise, the Extension Agronomist has materially aided the AAA program by giving farmers the necessary advice and information regarding the growing of various crops brought under the program, and ways in which acreage adjustments could be made most satisfactorily. The two programs supported each other particularly well in the home-grown feed project.

Soil Conservation—Progress in the formation of Soil Conservation Districts under the State Soil Conservation Committee is outlined briefly earlier in this report. The Extension Soil Conservationist, as well as the agents in the several counties, were important factors in the organization of these districts and the extension specialists in the several lines contributed their part in helping to work out practical conservation programs. By means of result demonstrations, tours, exhibits, illustrated talks, meetings, radio, publications, and the public press, the seriousness of the erosion problem and methods for combatting it were brought to the attention of more landowners and operators than ever before.

Much of the effort in soil conservation thus far is in the nature of laying a sound foundation. Farm people have been made more conscious of the tremendous losses they are suffering in that way. It has been demonstrated to them that soil conserva-

tion methods, when applied properly, are good farm management practices, and in most instances save time, labor and expense in farming operations, as well as the known soil and moisture saving advantages. Farm people, themselves, with the aid of specialists and technicians, are tackling the problem in an organized way and the methods that have been demonstrated to be successful are being made regular farm practices.

LIVESTOCK

WHILE the services of various kinds with individual classes of livestock have been continued, they have been associated closely with a central project of livestock feeding and production of home grown feeds. The soil conservation program has encouraged increased production of forage, both roughage and pastures. Maryland stockmen appreciate that this tendency necessitates more good livestock as the sole avenue for marketing such crops. They are confronted with the problem of shifting their feeding practices to utilize a larger proportion of forages advantageously. Activities of the Extension Service were designed to guide and assist them in making this shift.

The central project in this line was carried on in conjunction with the dairy and agronomy specialists and followed the same general pattern that was tried out in three counties the preceding year. A well-planned program was arranged which included definite enrollment of participating farmers in the several counties, a series of timely letters to each of them at intervals during the year, feeding schools, demonstration farms, tours, and other means of bringing to them pertinent information regarding production and use of feeds they could produce economically on their farms.

Reports show that without question this project has met with general favor and has resulted in distinct progress toward one of the major goals in livestock production in Maryland that has been advocated for a number of years. It has aroused an interest in the forage and roughage part of livestock rations, and the production of crops for that purpose to an extent that has not been achieved in former years.

Horses—Horse prices declined somewhat during the year, but apparently did not as yet affect the active breeding program materially, though signs of some decrease in interest seemed ap-

parent. The fact that mare prices for the most part, held their own indicated that many farmers and farmer breeders have faith in the program of raising their own replacement needs plus an occasional sale of a surplus work animal before his value depreciates materially. Farmers will be inclined to utilize horse power more if the cost of their farm field power units are not too high and moderate priced work stock may prove an advantage to them.

All county and State draft horse shows were larger in number of entries, and it can be stated conservatively that the quality was as good as, or better than, in former years.

Feeding and management meetings pertaining to draft horses were principally carried on in conjunction with the joint project dealing with home-grown feeds and feedings. Breeding problems required special meetings, and individual assistance in many cases.

A series of horse pulling contests proved an effective method of emphasizing a number of important points relative to horse power. They demonstrated the reserve power a team of horses can exert for a short time, if necessary; they demonstrated the necessity of properly fitted collars and harness, and proper shoeing for certain types of draft work; they gave an excellent opportunity to demonstrate good horsemanship and expert driving; and, they taught many lessons in the proper height of hitch and line of draft on the horses' shoulders. In addition, they were an effective method for arousing interest in draft horses.

Beef Cattle—The year was especially favorable for beef producers and breeders of beef cattle, which was reflected in the demand for and effectiveness of extension work in that line. Substantial assistance has always been rendered in connection with such events as shows and sales held by the various breed associations, and there was increased activity of that kind the past year. The Maryland Aberdeen-Angus Breeders' Association held both a spring and fall sale, with exceptionally good prices at each. Hereford breeders are making plans for a sale in the spring. Many new herds of both these breeds were established during the year.

The progress that has been made in development of high-quality breeding herds in Maryland was reflected by the showing

made by animals bred and raised in this State, both at exhibits in the state and at national and inter-national shows.

Work with commercial steer feeders included assistance with problems in both feeding and marketing. While much of it was conducted in connection with the home-grown feed program described, the increased interest required special activities. The same is true with respect to feeding and management of beef cow herds.

Sheep—Maryland's sheep population continues downward, regardless of the general feeling that a commercial farm flock has a definite place in the agriculture of the State and should be encouraged. It is believed that the development of an effective method for controlling internal parasites may make possible a reversal of the tendency and a growth in the sheep industry.

Most of the extension work with sheep the past year has been done through dipping, drenching and shearing demonstrations, together with the feeding and management project.

Swine—Until quite late in the year, swine prices were not encouraging and there was a decrease in the number of sows bred to farrow in the spring. In spite of the low price for hogs, swine growers, cooperating with the Extension Service, held a fairly successful sale last fall and are making arrangements for a sale of bred yearling gilts to be held in February.

Junior Livestock Work—Among the most encouraging phases of the extension work in animal husbandry is the growth in interest and activity by boys in their 4-H club work. There were 591 swine projects in 21 counties; 142 horse or colt projects in 11 counties; 121 beef cattle projects in 11 counties; and, 51 sheep and lamb projects in 10 counties. The exhibits of animals feed and managed by boys in these projects have become one of the most prominent features of shows throughout the State. They made excellent records, not only in their own special classes, but also in the open classes.

At the Baltimore Livestock Show, an Aberdeen-Angus steer that was bred and owned in Frederick county, and shown by a 4-H club member was Grand Champion steer of the show. The champion trio of calves was also a Maryland bred, fed and shown 4-H club group.

Sheep projects included fattening of western lambs, fattening of native lambs, and the maintenance of breeding flocks.

Although many of the swine projects are conducted on a small scale to supply the farm family with meat, some club members have developed good sized breeding herds, many with exceptionally high quality animals.

Among the outstanding achievements in livestock club work was the winning of the national non-collegiate livestock judging contest at the International Livestock Exposition by a team of Maryland 4-H club boys. This team won over teams from 25 other states.

Maryland club members, and those from other states, inspecting some of the fine animals at the International Livestock Show.

DAIRYING

THE dairy industry was not confronted with as acute problems as are experienced in some years and it was possible, therefore, for extension workers to devote their efforts more consistently to the fundamental programs designed to improve the quality of both dairy stock and products, together with greater efficiency and lower production costs. They were able to work closely with the well-organized dairymen of the State, which include organizations to promote the several breeds of

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dairy cattle, the herd improvement associations, and the milk marketing organizations.

It is a pleasure to again recognize the able manner in which the three cooperative marketing organizations have served the dairymen—the Maryland Milk Producers, Inc., the Maryland-Virginia Milk Producers' Association, and the Inter-State Milk Producers' Association. Extension workers have worked closely with these organizations for so many years that there is such mutual understanding and confidence that maximum results are obtained. With the development of changed conditions in the dairy situation because of the concentration of people in this area in connection with the rapidly expanding defense program, together with increased needs for dairy products for other reasons, the specialists and agents of the Extension Service were being called upon for increasing assistance and information. This situation was only getting well underway at the end of the year.

Pasture and Forage—For the third year, a systematic program was carried out, in cooperation with the agronomy and animal husbandry specialists, designed to improve pasture and forage crops, especially the quality of hay. Production of home-grown feed for dairy cattle has been emphasized for years as one of the most effective methods for keeping production costs at a minimum. This program has appealed to dairymen as a very practical approach to the problem and they have entered into it earnestly. Those who enrolled in the program received timely information through the year in the form of printed letters, each letter dealing with matters which should receive attention at the time it was received. In addition, the dairymen were given practical information at special meetings to discuss pasture and forage improvement. Tours to demonstrations and farms which furnished good examples also were used effectively.

While principal emphasis was placed on pastures and roughages, any matters connected with feeding and management of dairy cattle were discussed freely wherever the dairymen participating desired to deal with such questions.

Dairy Herd Improvement—A substantial increase was made in the number of Dairy Herd Improvement Associations functioning in Maryland. At the end of the year there were 17 associations testing 9,351 cows, which is an increase of 1,908 cows

compared with last year. These associations provide dairymen with a practical and economical means for determining the cows in their herds that are making a profit and those which they are keeping at a loss. Those having the testing done pay a fee for the support of the tester and the work is supervised by the Extension Service. The dairy specialist also sent a monthly news letter to participating dairymen, in which he gave timely information regarding feeding and management of the dairy herd.

As an indication of the value of records obtained from systematic testing, the following figures are quoted from the reports of Herd Improvement Associations: "Cows making 4,000 pounds of Milk and 158 pounds of fat gave an income over feed cost of $37; cows making 7,798 pounds of milk and 351 pounds of fat gave an income over feed cost of $140; those making 9,658 pounds of Milk and 447 pounds of fat gave an income over feed cost of $196."

Records from five counties are supplied for the permanent files of the U. S. Department of Agriculture. Both the records secured within the State and the file that is being built in the U. S. Department are of tremendous and increasing value.

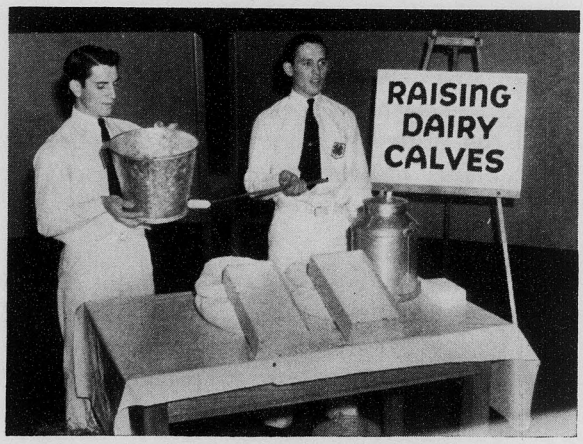
Seven bulls were proven during the year, but only two were "plus" bulls.

Advanced Registry Testing—Two types of official testing were provided owners of dairy herds under supervision of the Extension Service. In one type of testing, the owner selected individual cows whose official records of production he desired to establish, and in the other type the whole herd was placed on official test. These types of testing have been maintained for many years and the fact that breeders of dairy cattle have consistently increased their use of the service is evidence of the value they are finding in it. In the beginning, the tests were confined to testing of individual cows, but for a number of years there has been a steady trend toward heard testing. Those participating in the testing are kept informed of results as they are obtained and the progress that is being made, both by mimeographed publications and by frequent visits to their farms.

Breed Association—The active and aggressive interest that Maryland dairymen have taken in their favorite breeds is responsible for much of the progress that has been made in recent

years. Each breed is represented by a live association and the field days and other events promoted by them have afforded excellent opportunities for effective extension work. Definite programs of field days, sales, tours, exhibits and other events were planned and to a large extent were carried out. The annual reports of Extension dairy specialists give detailed reports of the progress made by the breed associations.

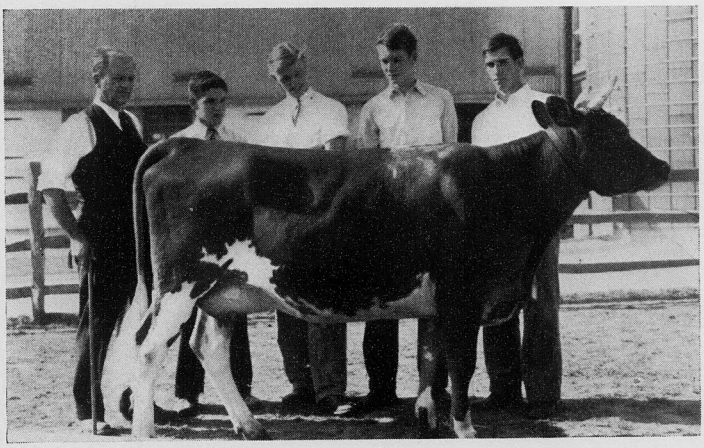
Grass and Legume Silage—Interest continued in making silage from grass and legumes. Additional experience is gained each year by those who are interested in saving some of their roughage in that way, and loss of some of their feed because of unfavorable weather for curing hay is arousing interest on the part of more farmers each year. Requests for information as to the best methods for ensiling grass and legumes increased.



Members of the 4-H club dairy demonstration team that won first place at the National Dairy Show. From the left: David McKee and Frederick Kretzer, both of Washington county.

Junior Dairy Work—Various phases of the dairy industry have always appealed to members of 4-H clubs, with the result that both Extension specialists and agents give much time to helping them in their chosen projects and training teams for various kinds of competition. Most is heard of the teams which win honors in State or national contests, but it must be remembered that for every team that reaches these larger contests many teams and many individuals are given intensive training.

There was an increase in the number of 4-H calf club members, and also in the numbers of animals shown at fairs, breed field days, and the State Fair. Seventeen counties sent judging teams to the state contest. Washington county established a record by sending the first all-girls judging team. The judging team winning first in the State contest placed fifth in the National dairy cattle judging contest.



The 4-H club dairy judging team placed fifth at the National Dairy Show. From the left: H. C. Barker, coach; Edwin Fry, Montgomery county; Robert Kahoe, Harford county; John Merryman, Baltimore county; Webster MacCartee, Howard county.

Maryland dairy demonstration teams have established an enviable record, winning first place in the Eastern section of the contest at the National Dairy Show the last two years. The winning team this year was from Baltimore county. They demonstrated the use of an individual calf pen and the feeding of a calf, using a nipple pail.

One cannot fail to be impressed with the influence dairy 4-H club work is having on the industry in Maryland. An ever-increasing number of fine herds of dairy cattle are owned by former club members and they are active and progressive in movements for improvement of the industry.

FRUITS

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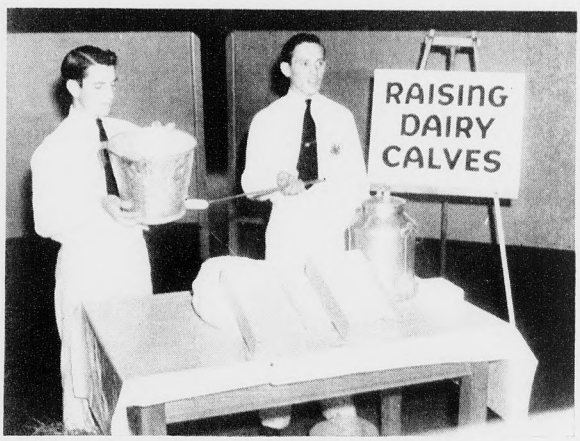

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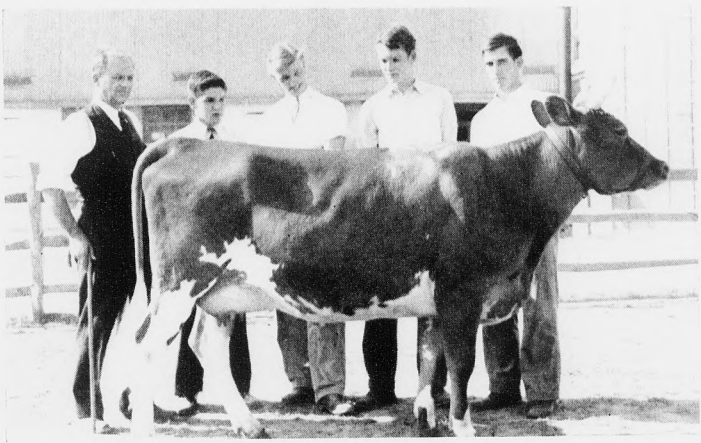

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Removal of Unprofitable Trees—Even though growers have been removing poor acreage of peach and apple orchards, there is still need for reducing further the crop of commercial fruit. With the coming of the tree removal payments under the Soil Conservation Program, it is expected that many more apple trees will come out. Though replanting will be done, it will consist of better varieties and will be done cautiously.

Removal of marginal trees, such as are shown, was encouraged as a part of the extension program.

The peach production picture is more confused. Excessive new plantings in the South are causing worry to Maryland growers. Some new plantings are being made in this State, but they are replacements and not in proportion to removals.

Growers are having to deal with some new injuries, due to borer treatment, cold injury, and possibly a new virus disease.

Marketing—Markets are still a puzzle. With the loss of export outlets, other methods of disposing of a portion of the crop assumed much greater importance. The Federal Surplus Marketing Corporation bought a substantial quantity of Maryland apples. Growers also found a good market for canning stock, which gave a fair return. Apple juice and cider are finding a better market.

During the year, the growers in Maryland, with those in other states, standardized the bushel and the 1⅛ bushel boxes, and possibly the bushel basket will be improved to meet competition of the boxes. This promises to cause cheaper packages, and will allow growers to sell apples on a fairer basis.

Four years ago the growers of Maryland, Pennsylvania, West Virginia and Virginia formed a cooperative plan to contribute to advertising apples from the Appalachian area, according to

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Some fine displays of fruit were shown at the annual farm products show, held in Baltimore.

individual growers' packed output of fruit. The plan has worked well and is merging into an ultimate national advertising plan. The specialist of the Extension Service has acted as secretary for the Maryland division.

Production—There is still need for greater efficiency and lower costs in production and much effort is devoted to the factors which together constitute that problem. The old topics of soil fertility, moisture, organic matter, erosion control, spraying, bruise prevention and proper packing are still among the important problems for the orchardists. In dealing with these problems and others, method demonstrations were conducted in thinning fruit, pruning, grafting, and contour planting, and, in addition, 180 advisory visits to growers were made. Result demonstrations included orchard management, fertilization, mouse control, thinning, poison ivy control, and mulching.

Small Fruits—The disease problem is serious in Western Maryland raspberry plantings. One meeting of growers was devoted to a disease clinic, the growers bringing plants for disease diagnosis. At another meeting, raspberry marketing was discussed. A promising development in that line was the buying of berries at good prices for freezing. No packages were required, and growers were permitted to market in other channels if prices were higher, returning to the frozen pack outlet whenever conditions were favorable.

Bruising of Fruit—This is one of the most important matters in the fruit growing business, for no matter how good the fruit may be on the tree, it is easily reduced in quality and grade by rough handling. During the last three years, a publicity campaign has been conducted by use of letters, write-ups, and placcards, with a view to impressing owners and employees with the importance of careful handling in picking and packing of fruit. This year, the placard distributed to growers for use in their packing houses contained a beautifully lithographed apple cut-out, with the caption, "Don't Let Rough Handling Ruin This." The placards attracted much attention and requests for copies were received from many states. It was noticed that much new padding was installed on fruit graders.

ORNAMENTAL AND VEGETABLE GARDENING

IMPROVEMENT of the surroundings of the home is a common interest in which the entire family can join. Perhaps that is one of the principal reasons why both adults and juniors continue to maintain a live interest in that line. Actual reports reflect very imperfectly the real progress, because such improve-

ments spread more readily from neighbor to neighbor than most any other activity. A trip through the country reveals the need for much more improvement of home grounds, but it also shows distinctly the great developments during the last few years.

Definite improvements of some kind in the ornamental gardening field were reported by 2,202 in the adult group and by 291 members of 4-H clubs.

Demonstrations by both the specialists and the agents in the counties were effective means of helping home-owners to plan and carry out home ground improvements. Tours, flower shows and marts afforded excellent opportunities for helpful demonstrations and advice, as well as their effect in stimulating and spreading interest. The women, especially, assumed a leadership which was responsible for much of the results obtained.

The policy of sending timely information monthly to those who signified an interest in ornamental gardening was continued through the year.

Planning Assistance—The evident desire for aid in improving home and public grounds that necessitated preparation of more or less definite plans continued much greater than could be supplied. During the year, 93 such requests were received and 59 plans were drawn. These requests included 55 home grounds, 19 school grounds, and 19 of a miscellaneous character.

Dahlia Trial Garden—A project at the University of Maryland supervised by the extension specialists promises to be of increasing value as a demonstration through the years. With the cooperation of the Baltimore Dahlia Society and the National Capital Dahlia Society, a dahlia trial garden was started on the campus.

Thirty-nine entries of three plants each of new seedlings were planted and nearly 1,000 plants of standard varieties were grown for the educational advancement and pleasure of the public. This was considered a very good showing for the first year, and many visitors took advantage of the opportunity to visit the garden.

Cooperation in Government Programs—A number of the programs conducted in Maryland under auspices of Federal agencies have required the assistance of the trained specialists in ornamental gardening of the Extension Service. One served as landscape architect for the Maryland State Park CCC projects. Also, as landscape architect for numerous WPA projects em-

bracing parks and school grounds, as well as NYA projects. Cooperation was given in a National Park Preservational Survey.

Vegetable Gardening—Much of the work with commercial vegetable growers is connected with canning crops and is reported elsewhere. While modern mass production of vegetables has had a tendency to check interest in home vegetable gardens, conditions of recent years, and especially those developing during the later part of 1940, have tended to reverse that trend. People have much more generally realized the desirability of growing a large percentage of their food needs and efforts to assist them in that line have met with more ready response. It is evident that 1941 will afford a continuation and expansion of that trend.

Greater attention was given to home gardens as the defense program for production of food developed.

Extension workers have not only emphasized the advantages of home gardens, but have aided in making them successful. Demonstrations of promising new varieties and strains, especial-

ly those that are better adapted to conditions in the several parts of the State, have added to the value of many gardens. The Maryland Experiment Station has proved that cool climate crops can be grown during the summer in the mountain areas and efforts have been made to convince growers that they can be made profitable.

Records from three counties reported 618 adults that followed recommended practices in their home vegetable gardens, and 1,071 members of 4-H clubs completed their work.

Wide distribution of a bulletin of the Extension Service, entitled "The Small Vegetable Garden," has provided brief, practical information to many thousands of home gardeners.

MARKETING

EFFORTS to assist growers in marketing Maryland's widely diversified agricultural and horticultural products more efficiently and profitably have extended into many lines. In addition to the activities carried on by those who devote their attention to marketing problems exclusively, the specialists in the several fields, such as fruits, vegetables, canning crops, poultry, dairy and livestock, include marketing as well as production in their respective programs of work.

While a great deal of assistance is rendered and progress is made each year, there is need for much more work in marketing and merchandising the farm products of the State than resources thus far have provided. Producers are by no means receiving full advantage of their preferred position with respect to markets for their products and a sustained program in that direction ranks in importance with the programs for more efficient production that were conducted throughout the years. Special problems are arising in connection with the defense program and the need for increased supplies of certain farm commodities and it is indicated that considerable of the efforts in marketing in the immediate future, and probably for a long period, will necessarily be devoted to dealing with conditions that are different from those experienced in the past.

Inspection Service—Improvement in the quality of farm products placed upon the market and better standardization have been recognized as among the most important steps for a number of years. In keeping with that need, an inspection service

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has been developed for a number of products, especially perishable products, which is for the use and benefit of producers, processors and shippers and is available on request. Supervision is furnished by the State Department of Markets, which is a part of the Extension Service, and other costs are borne by those who receive the service. Licensed inspectors were provided, in cooperation with the U. S. Department of Agriculture, whereby growers who desired could have their products officially inspected and certified on the basis of established U. S. Grades. Included in this service was: Shipping-point inspection of fresh fruits and vegetables, canning crops inspection, and dressed poultry and egg inspection. Included in the inspections the past year were: 469,924 bushels of apples; 36,353 bushels of peaches; 420,574 bushels of potatoes; 96,511 lugs of fresh tomatoes; 82,345 bushels of sweet potatoes; and 70,930 crates of strawberries.

A significant change was noted in the containers used in shipping potatoes. There were 184,570 ten-pound sacks shipped in 1940 as compared with 2,492 the preceding year, and 46,433 fifteen-pound sacks as compared with 2,421 in 1939. There was a good demand for potatoes in these small containers when the ordinary market was practically dead.

Canning Crops Inspection—Due to market conditions, some tomato canning factories in Maryland did not operate in 1940. However, eight plants bought their tomatoes on a graded basis and 632,470 baskets were inspected.

Much the same situation existed with respect to cannery corn, but one company operating two plants purchased corn on the basis of U. S. grades. A total of more than seven million pounds of corn, in the husk, was handled by that company.

Two canneries used the services of Federal-State inspectors in purchasing peas for canning on the basis of grades as determined by tenderometer readings, according to a method developed by the Horticulture Department of the University of Maryland.

Eggs and Poultry Inspection—There was an increase in the volume of eggs inspected in Baltimore and the Southern States Cooperative also expanded its grading program in Maryland. Those receiving the service paid a fee for the actual inspection, but the work was supervised by members of the staff of the State Department of Markets. The total of all eggs graded and certi-

fied under this supervision during the year was 1,529,782 dozens, with an approximate value of $374,796. This was an increase of 54,806 dozens over last year.

Inspection service for dressed poultry was available to all, but thus far it has been used only by Federal units, such as the U. S. Navy and Marine Corps and their various units, the U. S. Veterans Administration Facilities, and the U. S. Coast Guard. There were 78,677 pounds of poultry inspected in 1940, with an estimated value of $17,677. The increase in volume over last year was 14,486 pounds.

A rather extensive educational campaign was conducted regarding the fresh egg law. Some preliminary work had been done late in 1939, but, in line with the policy of enforcing regulatory measures principally by education of those affected, an effort was made to inform those subject to the provisions of the fresh egg law regarding its aims and purposes, as well as its requirements. Visits were made to 1,248 stores and the law and what it was hoped to accomplish were explained to the management of each store. Information was disseminated in other ways, both by those concerned directly with enforcement of the law and by the poultry specialists and agents in the counties. A check made by visiting 80 of the same stores six months after the first visit showed considerable change in the quality of eggs being sold.

Grading Demonstrations—Contacts were made during the year with hundreds of growers in connection with the various lines of inspection. It was most unusual for an inspector to sample any commodity except in the presence of one or more growers or packers, in most cases ranging from three or four to a dozen. In this way, it was possible to most effectively familiarize growers and packers with the grade defects that are scored against a particular commodity, and with other information connected with good marketing practices and the market situation.

Surplus Marketing Purchases—Apple growers were in difficult straits through most of the year and the Surplus Marketing Administration was asked to relieve the situation. Two buying programs were inaugurated—one during the early months of the year for the purchase of the 1939 crop from cold storage, and the other during the fall harvesting season. An effort was made to bolster the price of fresh tomatoes on the lower Eastern

Shore by purchase of some of that commodity. The bottom dropped from the potato market about the middle of July and it was arranged for the Government to enter the marketing of the early potato crop.

As a result of these programs, commodities to the value of $272,046 were purchased, consisting of 294,034 bushels of apples, 95,121 bushels of potatoes, and 20,955 lugs of fresh tomatoes.

All purchases were made in car lots and on the basis of U. S. Grades, and each grower was required to furnish an inspection certificate. In addition to making the necessary inspections, the Department of Markets of the Extension Service acted as receiving agent for the Surplus Marketing Administration and made it possible for growers to receive the benefit of the surplus purchases.

Turkey Marketing—The importance of good quality turkeys and factors involved in obtaining and maintaining such quality were demonstrated and emphasized in other ways. Definite efforts were made by the Maryland Turkey Producers' Association to improve the methods employed and general situation existing in the marketing of their birds. Specialists of the poultry and marketing departments continued to assist in every way in developing more satisfactory and profitable marketing practices.

Cooperative Associations—Encouragement of cooperative effort by farmers, both in the sale of their products and the purchase of commodities needed, has been the established policy of the Extension Service through the years. Maryland is fortunate in having effective cooperatives that are serving the farmers in various ways. All extension workers have assisted such organizations in any problems that confronted them. Specialists provided them with information bearing upon their particular fields of activity. The agents in the counties assisted in various ways, especially with respect to keeping the individual members informed.

Market News Service—Up-to-date information concerning the harvesting, shipment, supplies on the different markets, etc., was provided producers and shippers during the active seasons for several commodities. By means of radio, the public press, and otherwise, pertinent facts regarding the marketing situation were disseminated rapidly, so that producers could proceed with greater intelligence in disposing of their products.

POULTRY

SINCE poultry and poultry products are produced on approximately 92 percent of Maryland farms, with an aggregate value of about $15,000,000 annually, it is probable that this industry affects the income of more farmers than any other phase of agriculture. The peculiar position of the poultry industry in our permanent system of farming, its steady growth and apparently bright future make it exceptionally important.

Extension work during the year has included practically all factors involved in developing the poultry industry on a sound basis, including both production and marketing.

Poultry Improvement Plans—Participation in the Maryland Poultry Improvement Plan continued to increase, but not as rapidly as in the past. The number of hatcheries participating in breed improvement and pullorum control work did not increase materially, but practically all of the large hatcherymen are now participating in the work in one way or another. Hatcheries participating in this program have a total incubator capacity of 3,518,618 eggs, which is an increase of 41 percent over last year. With this large capacity, it is estimated that more than one-third of the chicks purchased by Maryland poultrymen are from hatcheries participating in the Maryland Poultry Improvement Plan. Hatcherymen are using more R. O. P. males in their flocks and this should help tremendously in improving production qualities of Maryland poultry.

One of the most important changes was the decrease in pullorum-tested flocks and an increase in the pullorum-passed and pullorum-clean flocks. This indicates that substantial progress is being made in the reduction of pollorum infection in hatchery flocks. Continuation of the program will result in further progress.

Turkey Improvement—A State and Tenative National Turkey Improvement Plan has been developed and was conducted during the year with a view to improving the hatchability of eggs, the vigor and livability of poults, and the conformation, fleshing and market quality of birds, and other measures to make turkey production more efficient and profitable.

Two turkey improvement schools were held for the purpose of providing producers an opportunity to qualify as turkey flock

selecting agents under supervision of the Maryland Poultry Improvement Board. These were the first schools of the kind held in this State and 11 agents qualified to select birds for the Approved Breeding stage of the Improvement Plan. Five producers with a total of 3,350 birds were under this stage of the Plan in 1940. They were all visited twice or more by the specialist, who assisted in and supervised the selection of the birds and gave suggestions on mating, management, rearing, etc.

A few breeders entered pens of birds in the Record of Merit Tom Breeding Stage of the Plan.

Poultry Marketing—Marked improvement was shown in the marketing of poultry and eggs. Increased quantities of poultry products were marketed cooperatively and this had an influence on the price levels, especially in the areas in which the cooperatives operated.

The Westminster Cooperative Poultry Products Auction, Inc., completed its first full year of operation in 1940 and is now well in its second year. It is operating at a profit and volume is increasing steadily. Assistance was given this organization in a number of ways, such as helping to design a suitable auction room for present and future needs and development of plans to secure the needed volume.

Through the efforts of this department, the Maryland Egg Producers, a cooperative egg marketing organization in Prince George's County which had been struggling with a financial problem, was enabled to place its business on a sound basis and was consolidated with the Westminster Auction Association.

During the past year a pooling or bargaining cooperative was established on the Eastern Shore. Assistance was provided in setting up its new marketing association and with various problems. It is hoped that this project may point the way to better markets for poultrymen on the Eastern Shore.

Many problems of broiler producers were given attention and their marketing problems were discussed with them. Due partly to the nature of the industry and to the fact that most broilers were sold on a sellers' market, there has not been active interest in marketing cooperatively.

The Poultry Products Marketing School was held at the University of Maryland. Its primary function was to assist those interested in the grading of eggs. With educational and enforce-

ment work under the Fresh Egg Law now being conducted actively, and expansion of the Federal-State egg grading program by the Southern States Cooperative in Maryland, producers are showing increased interest in production and marketing of better quality eggs.

Farm Egg Record—For the eleventh consecutive year, owners of farm poultry flocks were supplied books for keeping simple records of their poultry enterprise, together with timely information and advice regarding good management practices. The purpose of the project is to assist in solving the problems of low egg production, laying house mortality and low returns per bird, through the keeping of records and their analysis as a means of pointing out better management practices. The results have been extremely valuable, not only in providing those who kept records with specific information regarding the several factors affecting the income from their farm flocks, but also in acquiring very definite information pertaining to the poultry industry of the State.

INSECT CONTROL

AN extension program dealing with major insect pests is planned each year, but insect outbreaks frequently occur at a time when they are least expected and no set program can be followed strictly. Efforts are required in the control of pests of all kinds of plants, and also of animals and human beings. Effective control involves constant vigilance to keep informed as to the development of the many pests, possible improvements in methods and materials used for their control or eradication, and education to enable people generally to utilize proper control measures most effectively.

Pests of Fruits—During the last fifteen years approximately, a very effective spray service for Maryland fruit growers has been developed and operated, which includes control of both insect pests and diseases. This service is now used by practically all commercial fruit growers. A spray calendar containing directions as to the best control materials, the amounts to use, method of application, and time to apply is issued each year. A constant watch is maintained by specialists to determine the emergence and development of insects and growers are informed as to the most effective time to spray.

In order to make the spray service more effective, three large-scale demonstrations on codling moth control and one demonstration on rosy aphis control were conducted. Two demonstrations were conducted to determine the effectiveness of rotenone in controlling tarnished plant bug, green soldier bug, and stink bug on peaches. Use of rotenone instead of lead in the early sprays did not prove effective in controlling the peach insects.

A special effort was made to induce growers who had serious codling moth problems in 1939 to use sanitation measures in addition to the regular schedule. It is safe to estimate that 95 percent of the heavily infested orchards used chemically treated bands, and a small number made an attempt to reduce the packing house menace.

Canning Crop Insects—Further progress was made in development of effective methods for control of pea aphis. Various combinations of materials applied with different types of machinery were included in a large demonstration. The materials were tried under different pressures, at different wind velocities, and at different temperatures. A unique exhibit was devised for presenting the results of the several treatments. The aphis obtained in ten sweeps from each plot were placed in glass tubes one inch in diameter and the tubes marked to correspond to the variously treated plots.

Frequent examinations of alfalfa fields adjacent to pea fields for the presence of pea aphis made it possible to keep growers informed as to their abundance. This and other timely information pertaining to control were disseminated to growers throughout the season.

Isolated infestations of the corn ear worm on string beans were reported. While there were no reports of serious injury to lima beans from corn ear worm, a circular on control of that insect on string beans, lima beans, broccoli and tomatoes was prepared and distributed.

Pests of Field Crops—Large-scale demonstrations on control of potato insects were conducted on both the Western and Eastern Shores. A new phase of the project inaugurated during the year dealt with varietal resistance to leafhoppers and flea beetles. While no definite conclusions can be drawn in regard to the resistance to flea beetles and leafhoppers from the results this year, information was obtained which indicates clearly that

some of the varieties were more resistant than others to hopper burn. This work will be enlarged in 1941.

Demonstrations of the use of arsenate of lead at the rate of 10 pounds to each 1,000 square feet of space in tobacco beds to destroy white grubs, or rich worms, proved effective and of special interest to growers. Demonstrations on trapping the tobacco horn worm moth were continued. The information obtained was of greatest value in making control recommendations, but the demonstrations aroused so much interest among growers that they constructed their own traps and are utilizing them as a direct control.

One county reported in the spring that tobacco plants in the seed bed were being riddled by insects. It was found on investigation to be a dipterous larvae *Orthocladius nigritus*. A demonstration was conducted on a heavily infested bed in which a ¾ percent pyrethrum dust was applied to the small plants with a rotary duster and the bed then covered with cheesecloth. This treatment was apparently very effective.

A European corn borer survey on the Eastern Shore was conducted in cooperation with the Bureau of Entomology and Plant Quarantine. A tremendous increase in corn borer population was found as compared with previous years. Recent surveys have disclosed that the borers are present in counties heretofore thought to be free from the pest.

Educational efforts are being intensified to inform people of the life history of the borer and methods for its control.

Japanese Beetle—The main objectives of the Japanese beetle program are to delay the increase and spread of beetles in lightly infested areas, and to cooperate with farmers and others in controlling beetles in heavily infested areas, looking toward a permanent relief through the establishment of a biological complex which will consist of parasites and disease. The principal goals for the year were:

1. Establish disease in all heavily infested areas.
2. Provide education on all control measures, as spraying, lawn treatments, planting plans, and agronomic practices.
3. Trap all lightly infested areas for retardation purposes.
4. Cooperate with all farmers desiring to use traps by making them available under a lease system.

5. Demonstrate, under field conditions, the effectiveness of the milky white disease, the value of traps, and the value of delay in planting corn for beetle control.
6. Determine public opinion as to the value of the program.

A general summary shows that 8,003 pounds of material for treating with milky white disease were produced; 8,843 properties received treatment; 4,533 acres were treated; and 1,308 square-mile blocks each received three one-acre treatments. Prior to this year, 465 colonies of parasites had been released and surveys show that many of the releases have established themselves. No parasites were released during the year, as all available were

Assistant Director E. I. Oswald and County Agent J. Z. Miller examine an exhibit made in connection with the Japanese beetle tour.

used for rearing work to increase supplies for liberation in 1941. More than 76,000 eggs of the parasite *Tiphia vernalis* were obtained in rearing work. Altogether, 127,122 traps were employed during the year. They caught a total of 918,207 quarts of beetles, which is equivalent to 275.4 tons. Sprays and dusts were use quite extensively as repellants for the protection of plants, and lawn treatments were recommended primarily for cities and towns. Planting plans and agronomic practices were

used with good effect by many farmers. Opinions on the campaign obtained from 6,116 individuals showed that 94.6 percent favored the program and wanted it continued, only 1.6 percent were opposed to it, and 3.8 percent were noncommittal. The support given it by the State, counties, municipalities, and individuals is another evidence of confidence in the program.

Miscellaneous Insect Pests—A circular on control of insects attacking squash, cucumbers, and cantaloupes was distributed to growers. The number of requests for information on control of termites increases each year. Numerous requests are received for control of ants in homes, lawns, wells, golf courses, and gardens, and for control measures for carpet beetles, silver fish, old house beetles, clothes moths, mosquitos, flies, granary insects, livestock pests, forest insects, greenhouse and nursery insects. Each request received prompt attention and the effective recommendations not only saved money for the inquirers but made many friends.

APICULTURE

EXTENSION education work with beekeepers was concentrated more than usual on those who had indicated a desire to expand their projects, rather than so great effort to make new contacts as had been put forth in previous years. Personal instruction in the apiary for those who were more or less beginners constituted a large part of the work. This was especially helpful to a number of beekeepers with whom contact had been made in the last two or three years at bee culture schools and beekeepers' meetings.

Apiary Inspection—This service became firmly established as an integral part of the apicultural scene in Maryland. It is based on the resident county inspector, under supervision of the State apiary inspector. In accordance with this plan, nine district apiary inspectors were appointed.

While a certain amount of time was consumed by inspectors in locating apiaries and otherwise familiarizing themselves with their territory, it is felt that the number of colonies inspected is a good record for the first year. Results of inspections show 3.8 percent of the 6,279 colonies inspected were infected with American foulbrood. The most significant result of the work is indicated by the fact that American foulbrood was found in 13 of the 23 counties of Maryland. Of the remaining 10 counties,

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8 received no inspections. In all apiaries where this disease was located, the infected colonies were burned, either by the beekeeper or by the inspector at his request. With practically no exceptions, the inauguration of this service was welcomed by the beekeepers and their hearty cooperation was always in evidence.

Pollination Service—During the previous year an attempt was made to promote a better understanding between fruit growers and beekeepers. It was the aim to act as intermediary between orchardists who desired to secure worthwhile colonies of bees for pollination and beekeepers desiring to rent colonies. This effort proved highly successful and further progress was made in 1940.

Honey Marketing—In order to acquaint people with the valuable qualities of honey and contribute to its increased consumption, educational exhibits were displayed and demonstrations given at seven Maryland fairs and the Winter Farm Products Show in Baltimore. Efforts to extend the use of a standard Maryland premium list for honey and wax resulted in its use at three additional fairs.

PLANT DISEASES

WHILE it is known beyond question that diseases of various crops are the cause of immense damage each year, it is difficult to estimate accurately the value of control measures. There is no way to determine how great the loss would have been had the control measures not been employed. Nevertheless, the control methods which were demonstrated to growers and which they have put into practice have reduced the losses from some of the most destructive diseases to a point that they are not serious.

During 1940, specialists in control of plant diseases conducted 483 adult and 29 4-H club demonstrations, made 514 visits to demonstrations, 922 other farm and home visits, 86 visits to county agents, and addressed 31 meetings. In addition, they disseminated timely information regarding plant disease control through radio talks and articles in the public press.

Apple and Peach Diseases—The spray service, which has been operated for many years and which is used by nearly all commercial fruit growers, was continued. By visits to orchards and careful observation of the development of diseases, the specialists

are able to advise growers just when to spray for best results, and the kinds and amounts of materials to use. By means of cards sent out by agents in the respective counties, growers are informed promptly of the needs in the way of sprays. A demonstration for the reduction of russeting of apples and the control of apple scab was conducted again this year.

Growers were advised to destroy 454 peach trees which were found to be infected with virus diseases in a survey of peach orchards. Such trees would act as centers from which virus disease might spread to healthy trees.

Canning Crop Diseases—Use of resistant varieties has been found an effective method for controlling some of the most destructive diseases of canning crops. Among varieties that have shown greatest promise in that line and were recommended to growers were Golden Cross Bantam for Bacterial Wilt of sweet corn and Marglobe and Pritchard tomatoes for Fusarium wilt.

Other diseases have been controlled effectively by locating sources of disease-free seed and plants, and demonstrating to growers the desirability of using them. In cooperation with seed organizations and dealers, the use of Western-grown bean and pea seed has been encouraged for control of bean anthracnose and blight and pea leaf spot. The use of Southern-grown, inspected tomato plants was recommended for control of collar rot. Seed bed sanitation, seed treatment, seed bed spraying, and crop rotation were methods demonstrated for control of other plant diseases.

Potato Diseases—Two new blight-resistant varieties, Sequoia and Sebago, out-yielded the standard variety, Rural, in Garrett county, and in other parts of the State the Sequoia out-yielded the standard variety, Dakota Red. Demonstrations were conducted which showed the value of tuber unit planting and roguing in seed production, and the value of planting certified seed for producing table stock. A demonstration of the relative merits of bordeaux mixture and yellow copper oxide for control of blight, tip burn and flea beetle injury resulted in good control by both materials.

Tobacco Diseases—Blue mold, which a few years ago presented a serious problem to tobacco growers, was effectively controlled by methods that have been developed and demonstrated. Each county agent in the tobacco-growing counties conducted demon-

strations of both the spray and gas control methods. Growers were assisted also in controlling wildfire, blackfire, Fusarium wilt, brown rot, virus diseases, and house burn, although many growers now include control measures for all or a part of these diseases among their regular production practices.

Strawberry and Raspberry Diseases—The fields of 335 strawberry growers were visited and personal attention given to control of diseases. Fourteen demonstrations on roguing raspberry fields for control of virus diseases were conducted.

Miscellaneous Disease Control—Practically all crops, including ornamental plants, afford problems of disease control each year. Production of disease-free sweet potato seed was demonstrated. Treatment of seed, sanitation in the seed bed, spraying and dusting were among control measures given to growers of cantaloupes, cucumbers, cabbage and sweet potatoes. Specialists visited 45 nurseries, diagnosed diseases of ornamental plants and made recommendations for their control. Identification of disease was made on 262 specimens that were submitted by the people of the State.

FORESTRY

WHILE educational activities with both adults and juniors were continued along similar lines to those employed in recent years, it is significant that forestry has definitely passed the stage where emphasis is placed on any one, or a few, cultural measures applied indiscriminately throughout the State. Advice and assistance are still rendered to those who desire demonstrations on proper methods of thinning young timber, planting forest trees on eroded land, or cutting mature timber selectively. Such service, though considered good forestry, is looked upon as a stop-gap, pending availability of funds to make possible the employment of additional foresters to further intensify forestry projects on a community or county-wide basis.

Farm Foresters Appointed—A start on such a program was made when a Farm Forester was appointed on March 1 and assigned to work on forestry among the farmers of the two northern election districts in Harford county. This program aims to teach the intelligent use of farm woodland through proper cutting methods, to provide a profitable market for woodland products, and to demonstrate the practicability of such a program for a county.

The volume and rate of growth of the timber in each tract of each cooperator is calculated and a plan is devised, with the help and concurrence of the owner, whereby the owner agrees not to cut a greater volume of timber in any one year than the annual growth. This type of cutting is known as cutting on a sustained yield basis and if followed strictly will maintain the productivity of the woodland and allow an annual income.

For the present, cooperation is offered only to farmers who through the excellent conditions of their farm plant and their past background of long tenure seem to indicate that they will continue to operate their farms efficiently and will continue the program of farm woodland improvement until the results of good management become apparent. It is estimated that the average farm woodland in this section will require 20 years of intensive forest management before it can be put into first-class condition. Over-cutting, particularly of the best trees, has left most of these stands in an under-stocked condition and the greater portion of the trees are of species having little use for the more valuable types of forest products.

To date, seven farmers with 1,350 acres of which 470 are in woodland are cooperating in the project, which is sponsored by the Extension Service, State Department of Forestry and U. S. Soil Conservation Service.

Eastern Shore Project—A forestry program, basically similar in nature, is in operation in the Northwestern portion of Worcester county. This area contains 30,000 acres of woodland and annual growth is estimated at 8,000,000 board feet.

A Project Forester was employed on October 1 to assist the woodland owners in putting their lands on a sustained yield basis. If the timber in this section is cut along the lines of sound forestry principles, the whole county will benefit through the steady payrolls to logger, lumberman, and timber land owner. If a policy of over-cutting is followed, the timber and payrolls will soon disappear, leaving unproductive land which for the most part is unsuitable for agriculture. The U. S. Forest Service and State Department of Forestry are cooperating in this project.

CANNING CROPS

IT appears essential each year to devote a portion of the effort to more or less emergency problems, but it is the aim to carry on a continuous program designed to improve some of the major factors in the industry.

Fertilization—Due partially to inherent lower fertility and partially to effects of harmful cultural practices, including frequent double-cropping, the soils in the canning crop areas of Maryland are generally lower in fertility than those of some of the other canning areas in the country. Efforts have been directed through the years toward practical means and methods for correcting this condition, with a view to improvement in both production and quality of canning crops in this State. Each year registers progress in that direction.

Included this year were demonstrations of the effect of different placements and compositions of fertilizers on peas, and also the residual effect on the lima bean crop that is commonly grown following the peas in some sections. Observations were made of any injury to plants from fertilizers or methods of placement.

The general method of fertilization for canning tomatoes does not supply sufficient fertilizer to carry plants through the season in vigorous condition. Demonstrations have shown some advantage from applying relative small amounts of fertilizers in bands at the sides of the plants. Some growers have been influenced to make side-dressing of nitrogen and potash fairly late in the season. As a variation of this method, two demonstrations were conducted in Worcester county the past season in which superphosphate was applied before planting and a 10-0-15 fertilizer was used as a side-dressing. Both growers using this method made the Ten-Ton Tomato Club.

One demonstration was conducted to show the value of green manures in tomato production, using various crops.

Variety Demonstrations—Because new varieties are constantly coming on the market and market preferences are changing constantly, demonstrations to show the new strains and selections are almost a regular feature of this work.

While Maryland is not generally considered in the sweet pea packing area, development of new early varieties has made it possible to grow and pack this product commercially. Demonstrations of the new varieties have been conducted for a number of years. Approximately nine percent of the pack last season was of the sweet varieties, which is an increase from practically none four or five years ago.

The new, small, thick-seeded varieties of lima beans developed recently for canning were demonstrated, being planted at three different dates.

A variety demonstration of spinach was conducted at the request of growers, commission merchants and canners. Looking towards the possible contracting of spinach for canning in the future, it was requested that a variety demonstration of the outstanding smooth and savoy-leafed types be planted under field conditions in the Patapsco neck area, that trials be conducted to determine the cost of cutting as leaf and as crown spinach, and that some commercial trials be made to compare row planting with broadcast methods of production to determine the possibility of using machines for harvesting leaf spinach. Tests of a new spinach harvesting machine indicated that it did satisfactory work where spinach was planted on level, or nearly level beds, free from stones and other foreign material, and that a machine crew of five men did the work of about 25 hand cutters.

Fifty-one varieties and strains of tomatoes were planted for observation and demonstration, with a view to finding the varieties most desirable for canning in this area.

Tomato Seed Improvement—Work was continued with two commercial strains of Marglobe and one of Rutgers used by the Tri-State Packers' Association. The directors of the Association decided not to save their own seed during the coming year, but requested that these strains be carried along. No stock seed was saved, but a number of individual plant selections were made in a further attempt to refine the strains.

Disease and Insect Control—Assistance to canners and growers in control of a number of insect pests and diseases is a part of the service each year. Somewhat systematic programs are carried on through the years in order to cope with some of the more serious pests.

The pea aphis was probably not as serious last season as during several recent years, but did considerable injury. Most canners are equipped to spray or dust when conditions justify and the principal request is for information on time of application.

Several field demonstrations in dusting tomatoes for control of leaf blight were conducted.

Stewart's disease was more severe on sweet corn during the past season than at any time in recent years. Varieties normally resistant showed heavy infections in many cases this year.

Ten-Ton Tomato Club—The Maryland Ten-Ton Tomato Club was conducted for the thirteenth consecutive year, with 312 growers enrolled—an increase of 70 over the previous year. Seventeen growers succeeded in making ten or more tons to the acre. These will receive certificates of membership in the Club, and the two winners in the large and small acreage groups will be given a trip to the annual Canning Crops School at the University of Maryland.

TOBACCO

PERHAPS no other crop occupies so important a place in the economy of a given section of the State as does the tobacco crop in the five Southern Maryland counties. The area is not large when compared with the total area of the State, but the welfare of all people are dependent to a particular degree upon the tobacco crop. In view of these facts, there is special significance to help given growers in improving their crop and increasing the income from it. All of the factors that enter into increased production of high-quality tobacco, and also the problems involved in handling and marketing the crop have been dealt with in the extension program.

Cultural Practices—It has been the aim to reduce as rapidly as possible the percentage of tobacco growers who use strains or hybrids of unknown origin, which produce low yields of inferior tobacco. While improvement in this line spreads rather rapidly by neighbors obtaining seed from each other when a crop does well, it is estimated that more than one-third of the growers still use strains that are not most economical for their particular farms.

A majority of growers sow seed that has not been cleaned or tested for germination and have more or less failure with their plant beds. As a result of efforts to improve that situation, 445 growers had their seed cleaned and tested for germination by the Seed Laboratory of the University.

Because of the laborious and expensive task of picking grass and weeds from tobacco plant beds and the danger of spreading disease in the beds, a number of demonstrations were conducted with a view to finding a more satisfactory method of keeping the plant beds clean. Encouraging results were obtained from the use of cyanamid in the proper amounts and in the proper manner. Growers are adopting the practice and it promises to save much time and money for tobacco growers.

Tobacco Diseases—An assistant plant pathologist was assigned to conduct work on tobacco diseases with a view to more effectively dealing with those which cause growers more serious trouble and loss. He supervised a number of field demonstrations and tests, the results of which will be of value in the 1941 control program.

Wildfire was not a serious disease, but blue mold caused considerable concern during its short life of about 42 days. Among its most serious aspects is the fact that an attack often delays transplanting of seedlings to the field and causes tobacco to be planted somewhat too late to mature in time for a good cure.

Soil Fertility and Fertilization—By means of a service based upon tests of samples of soil and history of the land from which the samples were taken a definite service was rendered to 637 tobacco growers. After a careful study of the results of soil tests to determine the plant food requirements and the history of the soil during the last few years, a specialist made definite recommendations which involved use of adapted plant food, including use of lime, commercial fertilizers, manure, cover crops, rotations, etc.

Since many of the Southern Maryland soils have been found deficient in potash, a number of demonstrations were conducted to determine how much of that element should be applied as a side-dressing. Although soil tests will still be necessary, helpful information was obtained as a basis for recommendations.

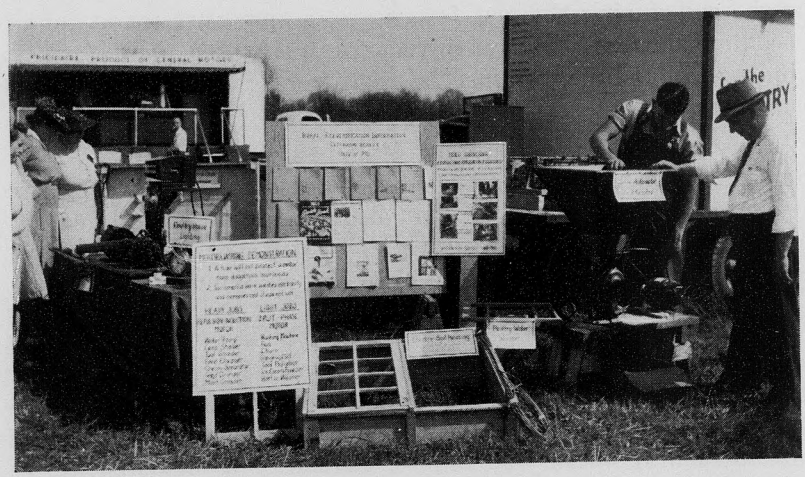
Marketing—The loose-leaf method of selling tobacco was inaugurated in Maryland in 1939, and about 35 percent of the crop was sold under that system of marketing. In 1940, about 50 percent of the crop was sold on the loose-leaf floors. Under this plan of selling there was some opportunity to demonstrate the value of better stripping and sorting.

During an intensive campaign in the spring, the relative advantages of the Baltimore hogshead market over the loose-leaf system were considered at more than twenty meetings of farm bureaus, special committees of growers, and others. Developments on both the hogshead and loose-leaf markets were observed closely, including trends, prices paid and demands for special kinds of tobacco. Market information was disseminated, giving volume sold, prices received and other pertinent facts.

AGRICULTURAL ENGINEERING

AS the use of mechanical power, more efficient buildings, contour farming, and the like have come into more general use, the demand for assistance in the engineering field has increased correspondingly. During the year, specialists and agents were called upon for assistance with problems on maintenance and repair of practically all kinds of farm machinery and implements, and also home equipment. More extensive programs were carried out in rural electrification, farm structures, drainage, home utilities (water, light, heat, sanitation), and with boys and girls in 4-H clubs.

Rural Electrification—Adequate wiring and lighting facilities were among the important phases of this program, which extended over the entire State. Through cooperation of Maryland farmers, the REA made available during the year $1,037,000 for constructing 1,116 miles of line to serve 2,451 members; 938



An exhibit by the Extension Service at the Rural Electrification Administration farm tour, which held a three-day demonstration in Southern Maryland.

miles of this line remain to be constructed and put into operation in 1941.

The wide extension of electricity was brought about by a greater appreciation of the value of electricity, by a more liberal attitude of utilities, by a more extended REA program, and by the establishment of more reasonable and uniform rates, along with the widespread educational program of the Extension Service.

The REA program alone carries rural electrification activity into 15 of Maryland's 23 counties, with parts of 4 other counties being scouted by REA field men. Service to farmers in this particular area is being developed as rapidly as possible by the local utility, as well as direct representatives of the REA.

Almost twice as many rural electrification demonstrations were held in 1940 as in the preceding year. Electricians were invited to attend and it is felt that much was accomplished through making them familiar with fundamental reasons for adequate wiring.

Farmer interest is increasing rapidly in the production, sale and use of frozen foods. On the Eastern Shore of Maryland and Delaware alone, more than 5,000,000 pounds of vegetables, fruits, and sea foods have been frozen and shipped to city markets.

Other activities in the use of electricity included: A survey of both natural and artificial lighting of dairy barns with a view to improvement; assistance in developing and testing a small electric milk pasteurizer and an egg cooling apparatus; and conducting schools for teachers of vocational agriculture.

Farm Structures—The objective of the building plan service is to supply, at nominal cost, blueprint working drawings for approved designs of farm structures and equipment to anyone who requests them. The Plan Book and Supplement together constitute in effect an illustrated catalog of the designs for which the service is prepared to furnish blueprints.

During 1940, in response to specific requests, a total of 298 blueprint plans was sent to 164 individuals. The scope of the service was extended during the year to include many designs not before available. In addition to furnishing plans, visits were made to a number of farms for the purpose of consultations regarding farm buildings, remodeling, and construction problems.

Drainage—The program in drainage was expanded materially by the addition of an Extension Specialist in Drainage Engineering. He assisted farmers with the design and construction of drainage systems of individual farm size, utilizing the outlet facilities provided by the work of CCC Drainage Camps. He also aided in the preliminary operations of forming public tax

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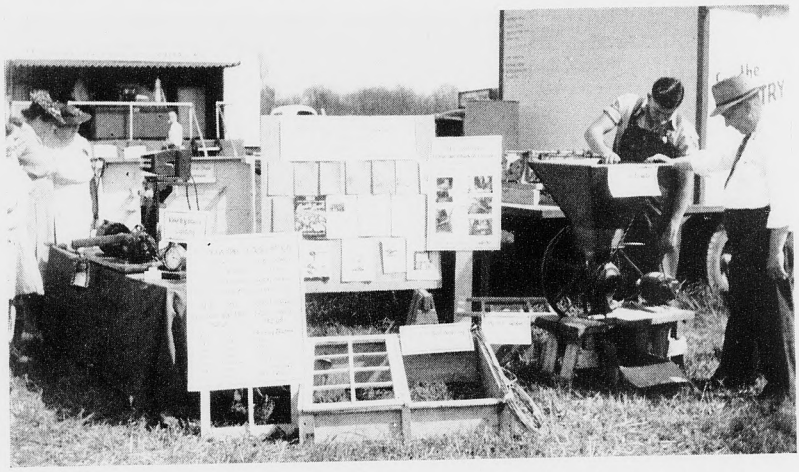

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ditch organizations. Promotion of maintenance work on projects which have been rehabilitated by CCC Camps claimed a portion of his effort.

Four CCC Drainage Camps were in operation at the beginning of the year, located at Goldsboro, Powellville, Westover and Vienna. All are still in operation except the one at Vienna, which was closed in June.

This project is supported by State and county funds in the amount of $50,000. From these funds, a dragline excavator was purchased and they were available also to employ operators, and to supply fuel, repairs and other operating expenses. A plan has been worked out in cooperation with other interested agencies which contemplates the construction of a channel 14.4 miles long, involving excavation of more than 1,000,000 cubic yards of material. With the public support afforded, it promises to provide drainage for thousands of acres of agricultural land that are now imperfectly drained.

Home Utilities—Improvement of homes, especially the kitchens, along with sanitary facilities, was one of the essential pieces of work, and one of the things most desired by rural women. Home demonstration agents took an active part in the program of kitchen modernization, as well as in the improvement of the entire home, including heating, plumbing, water systems, and waste disposal.

The agents in the counties report that 82 homes were remodeled in accordance with plans prepared by the Extension Service. Eighty-six sewage systems were installed, 151 water systems, 66 heating systems, and 369 home appliances and machines. Help in many phases of the home utility program was given by the specialist at the time of his visits that were made primarily for rural electrification.

4-H Electric Club Work—Approximately 150 boys did varying amounts of work, ranging from applying electricity to their present projects to building toy electric motors. Thirty-two toy motor sets were furnished 4-H boys and a supply of parts is kept on hand to prevent delays in filling requests.

A set of homemade equipment was built for 4-H leader schools and demonstrations. A pig brooder, electric chicken brooder, model hotbed, poultry house lighting, switch control of lights,

poultry water warmer, and toy electric motors have been built, so that they can be knocked down and transported easily about the State.

Miscellaneous Assistance—A limited amount of aid was given to sweet potato growers who had experienced very heavy losses of their potatoes in storage during the previous winter. Dairy farmers in one county were given definite help in improving the operation of dairy boilers required by the local enforcement of a State boiler inspection law. With 23,000 farms yet without telephone service, information was provided on procedure for getting such service and its approximate cost, with a view to providing means of communication in cases of emergency.

ECONOMICS AND FARM MANAGEMENT

ALTHOUGH most programs in extension work are planned with a view to their economic phases and good farm management, certain efforts deal strictly with problems and factors of that character. The principal organized program had to do with keeping adequate records for intelligent planning and management, although activities were conducted also in the fields of marketing, cooperation, taxation and land use.

Farm Management—The objective in this work was to increase the number of farmers who have an accurate business knowledge of their farms. Out of 200 records started in 1940, 139 were completed. Those completing their record books were given assistance in planning farm operations for the coming year with suggestions for strengthening the weak points in their plans of operation.

In addition to farm records, substantial assistance was given in organizing new farms and reorganizing farms to meet changing conditions. The help included such matters as rotations, farm lay-outs, farm leases, and the balancing of enterprises.

A Maryland 4-H club boy received the highest honor in record keeping in a national contest, and other 4-H club members kept records of their farm business.

At the request of the Defense Council, a study was made of food production and consumption in Maryland. It shows the amount of individual crop and livestock products produced and required to meet normal needs.

Because of the shortage of farm labor due to the defense program and increase in industrial activity, material was collected to show the amount of farm labor required, how much was available, ways to decrease the amount of labor required, and sources of farm labor.

Farm Marketing—Attention was given to the establishment of a centralized market for fresh fruits and vegetables in Baltimore. Physical facilities remain in about the same condition as they were 10 to 20 years ago, but educational progress has been made in acquainting members of the trade with the marketing problems in Baltimore and measures that will be necessary for sound market improvement.

Farm Taxation—A tax report was prepared for the joint committee of the Maryland Farm Bureau and Maryland State Grange. When adopted by those organizations, it became the tax program of the farmers of the State and was the basis of extension educational work on taxation carried on by representatives of the Extension Service.

Miscellaneous Activities—Special efforts were made to thoroughly inform Maryland farmers as to the outlook at the beginning of the crop planning and planting season. By means of an outlook report, radio talks, and presentation of facts to farm groups, the best information available was disseminated widely among those engaged in the many phases of the State's diversified agriculture.

Some of the other activities included: Assisting with the 1940 agricultural census; studying farm labor situations; closer cooperation in farm and home economic problems and efforts; cooperation with officials of the Maryland State Planning Commission with respect to an economical and social survey of recreational facilities in the State; observation of methods used in mapping the land use capabilities of Maryland soils; and work with a State Nutrition Committee regarding dietary needs of the people and the mapping of a program whereby they can receive better balanced diets.

RURAL SOCIOLOGY

WORK in rural sociology was directed largely toward helping various types of organizations plan and carry out effectively the types of programs and activities adapted to their

needs. Included among such organizations were the land use planning committees, Farm Bureau, Grange, farmers clubs, Parent-Teacher Associations, consumer cooperatives, county community councils, citizen associations, and rural churches.

The work of the Extension Service was closely associated with the land use planning program that is being carried on throughout the State. As a result, the county and community committeemen who are attempting to develop comprehensive programs of land use best adapted to their localities and conditions have a much better understanding of the project in which they are engaged.

The assistance rendered by extension workers was of two general types. It consisted of supplying helpful information for use by discussion groups of various kinds and also instruction and training in most effective discussion procedure in order to obtain definite results and arrive at conclusions that expressed the consensus of prevailing opinion.

Group Discussions—The aim has been to help rural people utilize group discussions in such manner as to develop leadership and also to conduct their discussions so as to save time, build group spirit, and secure definite results. Much of the loose, dilatory, indecisive talk of former days has been replaced by the more pointed and orderly movement from opinions and facts to concise conclusions. The work was especially effective in cooperation with Granges and Farm Bureaus in their programs, and in community councils. There were some eighty odd discussion groups operative, with a total attendance of more than 22,000.

One of the significant results was the increased interest on the part of young people in personality development, leadership training, and the part that young people play in planning.

CROP ESTIMATES

DEFINITE information regarding the condition of Maryland agriculture, the acreage of various crops planted and their progress during the growing season, the yields and total production, and other facts that reflect the status of the State's fundamental industry are of vital importance to both those engaged in farming and those in other lines of business. Especially in the years since more definite crop and acreage planning and

adjustment have been an essential part of established agricultural programs, facts of this character have been a virtual necessity.

For years, the Maryland Extension Service and the Division of Crop Estimates of the U. S. Department of Agriculture have cooperated in an arrangement whereby trained statisticians are stationed at the University of Maryland for the purpose of assembling information and making periodic estimates of crop conditions, yields, etc. C. E. Burkhead, chief statistician, and his associates have conducted the work in an able manner and have been most cooperative and helpful. While there is great need for expansion of the force, especially with a view to obtaining reports by counties, excellent service has been rendered by the force now available.

STATE HORTICULTURAL DEPARTMENT

THE State Horticultural Department has been very closely coordinated with the Extension Service for many years by virtue of the fact that both function under direction of the Director of Extension. The work of the former agency is concerned with control and inspection features, but the fact that to a large extent the same personnel operates in both capacities makes it possible to incorporate much educational extension work with control duties.

The State Entomologist and State Plant Pathologist are responsible for active prosecution of the work conducted by the State Horticultural Department and detailed reports are made by them in the biennial report of the University. Professor C. E. Temple, who served as State Plant Pathologist for many years, retired and Dr. R. A. Jehle was appointed to that position. Dr. Jehle has had many years experience in plant disease control in Maryland.

CONCLUSION

THE foregoing is a most sketchy outline of some of the activities of the Extension Service during 1940. Each year the service extends into new fields and established lines of work are expanded.

We are proud of the progress made in some of the broader aspects of a sound and permanent agriculture and rural life for the State, such as in development of soil conservation, the live-

stock, dairy and poultry industries, and the serious attention being given by farm people to planning better use of their land resources.

We are proud also of the manner in which all Extension forces are responding to the needs in connection with the uncertain conditions incident to the war and are confident of the valuable service they are prepared to render in whatever measures lie ahead in the period of emergency. Such a trained and experienced force extending into each and every county and community in the State is a bulwark of strength whose potential value cannot be estimated.

The great need has been additional funds and it is not an exaggeration to state that the work has been limited because of lack of funds for personnel, travel, publications, and otherwise. Salary cuts made during the depression have not been restored and it is hoped that in the near future worthy workers may be rewarded for the extra duties they have assumed willingly.

Appreciation is expressed for splendid cooperation by the various departments of the University and the heads of the respective departments, who are largely responsible, with the specialists, in carrying on project work.

Acknowledgement is also made of the fine cooperation extended by the Office of Extension Work in Washington, as well as various other Federal activities that have been carried on in cooperation with the Service.

Finally, the writer and the whole force appreciate the support and assistance of Dr. H. C. Byrd, President of the University of Maryland, who has been ready at all times to promote the work.

SUMMARY STATEMENT OF EXPENDITURES FOR EXTENSION WORK, BY ITEMS OF EXPENSE AND SOURCES OF FUNDS

	Total	Federal Funds			Offset Funds	Funds Not Used As Offset		
		Smith-Lever	Capper-Ketcham	Further Development		College and State	County	Other
Personal Services:								
Salaries—								
Administrative	$ 14,349.18	$ 8,690.71	.....	.....	$ 4,408.47	$ 1,250.00	.....	.....
Supervisory	10,415.00	8,740.83	.....	.....	1,674.17	.....	.....	.....
Specialists	100,701.45	43,989.69	.....	.....	10,804.99	43,091.00	.....	$ 2815.77
Agents	134,083.84	72,964.57	$25,812.98	$3,740.00	22,583.78	115.00	$ 8,667.51	200.00
Clerks—Headquarters	27,270.25	15,028.80	.....	.....	7,378.06	4,662.01	.....	201.38
Clerks—County	30,253.12	6,897.89	.....	.....	3,234.49	.....	18,985.50	1,135.24
Labor	25,216.36	.....	.....	.....	.....	25,097.41	.....	118.95
Supplies and Materials	33,302.16	937.50	.....	.....	352.95	25,484.52	5,810.00	717.19
Communication Service:								
Telephone and Telegraph	1,986.17	241.28	.....	.....	101.97	1,642.92	.....	.....
Postage	1,958.62	284.96	263.63	.....	.....	1,164.18	.....	245.85
Travel expenses:								
Administrative	1,502.41	931.35	.....	.....	515.60	50.11	.....	5.35
Supervisory	2,113.17	1,610.69	.....	.....	295.03	179.15	.....	28.30
Specialists	25,762.12	2,056.11	.....	.....	6,076.60	14,433.38	.....	3,196.03
Agents	31,808.96	3,008.39	.....	.....	493.74	410.35	26,603.00	1,293.48
Non-Scientific	6,466.54	.....	.....	.....	.....	356.74	.....	6,109.80
Transportation of Things	2,967.16	61.97	.....	.....	49.43	2,843.32	.....	12.44
Printing, Binding, Etc.	2,523.99	.....	.....	.....	171.16	2,196.07	.....	156.76
Furnishing of Heat, Light, Etc.	32.58	.40	.....	.....	.....	32.18	.....	.....
Equipment	1,802.40	.....	.....	.....	.....	1,410.39	.....	392.01
Miscellaneous:								
Rent	5,436.55	40.00	.....	.....	30.00	5,044.05	.....	322.50
Repairs to Equipment	659.89	35.40	.....	.....	.....	619.49	.....	5.00
Laundry Service	5.79	.....	.....	.....	.....	1.50	.....	4.29
Not Elsewhere Classified	23,623.11	.....	.....	.....	.....	23,070.50	.....	552.61
Total	$484,240.82	$165,520.54	$26,076.61	$3,740.00	$58,170.44	$153,154.27	$60,066.01	$17,512.95

SUMMARY STATEMENT OF EXPENDITURES, BY PROJECTS, SHOWING SOURCES OF FUNDS USED FOR EXTENSION WORK

Not Elsewhere Classified	23,623.11					23,070.50		552.61
Total	$484,240.82	$165,520.54	$26,076.61	$3,740.00	$58,170.44	$153,154.27	$60,066.01	$17,512.95

SUMMARY STATEMENT OF EXPENDITURES, BY PROJECTS, SHOWING SOURCES OF FUNDS USED FOR EXTENSION WORK

Projects	Total	Federal Funds			Offset Funds	Funds Not Used As Offset		
		Smith-Lever	Capper-Ketcham	Further Development		College and State	County	Other
Administration	$ 42,379.87	$ 6,926.79	$ 263.63	.....	$ 5,310.67	$ 29,878.78	.....	.....
Publications	12,127.77	7,695.25	.....	.....	1,213.32	3,065.56	.....	$ 153.64
County Agent Work	124,051.88	54,932.84	13,045.32	$3,740.00	16,437.19	468.47	$34,060.75	1,367.31
Home Demonstration Work	97,398.30	38,321.31	12,767.66	.....	13,867.81	577.66	26,005.26	5,858.60
Extension Club Work	15,679.34	9,571.56	.....	.....	1,913.12	268.80	.....	3,925.86
Agronomy	5,772.82	3,437.16	.....	.....	749.95	1,356.26	.....	229.45
Animal Industry	7,149.44	2,753.20	.....	.....	1,875.05	2,395.89	.....	125.30
Horticulture	11,156.83	7,065.91	.....	.....	1,785.99	2,271.93	.....	33.00
Dairying	10,410.36	3,672.66	.....	.....	361.44	4,596.58	.....	1,779.68
Agricultural Marketing	17,863.51	2,233.59	.....	.....	1,709.90	9,879.91	.....	4,040.11
Imp. Poultry Husbandry	11,956.57	7,521.60	.....	.....	1,690.88	2,744.09	.....	.....
Entomological Extension	74,370.24	300.00	.....	.....	.....	74,070.24	.....	.....
Pathology	11,484.48	450.00	.....	.....	75.00	10,959.48	.....	.....
Canning Crops	4,523.20	2,774.95	.....	.....	1,240.93	507.32	.....	.....
Farm Forestry	2,201.70	84.40	.....	.....	2,070.00	47.30	.....	.....
Poultry Marketing	3,909.43	1,384.95	.....	.....	1,361.45	1,163.03	.....	.....
Rural Engineering	7,726.00	3,605.03	.....	.....	1,132.32	2,988.65	.....	.....
Home Management	3,147.38	2,183.24	.....	.....	939.13	25.01	.....	.....
Economics and Farm Management	3,422.70	1,584.19	.....	.....	613.05	1,225.46	.....	.....
Apiculture	1,462.31	188.56	.....	.....	.....	1,273.75	.....	.....
General Education Extension	2,444.84	.....	.....	.....	.....	2,444.84	.....	.....
Extension Work in Rural Sociology	319.47	.....	.....	.....	.....	319.47	.....	.....
Tobacco	3,981.28	3,361.79	.....	.....	552.97	66.52	.....	.....
Home Furnishing	1,474.86	724.75	.....	.....	704.40	45.71	.....	.....
Nutrition	3,450.38	2,446.60	.....	.....	963.85	39.93	.....	.....
Clothing	3,350.88	2,114.10	.....	.....	1,189.81	46.97	.....	.....
Soil Conservation	1,024.98	186.11	.....	.....	412.21	426.66	.....	.....
Total Expenditures	$484,240.82	$165,520.54	$26,076.61	$3,740.00	$58,170.44	$153,154.27	$60,066.01	$17,512.95